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DOUBLE & SINGLE TULIPS.



SEPTEMBER, 1886.

IT IS A gratifying fact that farmers' picnics and fruit-growers' picnics, and summer excursions by rural people are becoming common. No class more need and deserve recreation and short respites from their accustomed duties than working country people. To go a summering has well nigh become a national habit. The time thus spent varies from a day to weeks; we go to the lakes, to the river sides, to the sea, to the islands, the mountains, the springs. We go as individuals and as families, and as societies and artisans. The poor children of New York are looked up, and a fresh air fund provided, and they are sent to the country for a few weeks.

This habit is founded on a natural want, induced, no doubt, to a great extent, by the high temperature of the summer months, which contrasts so strongly with the cold weather of winter and the cool nights of our short springs. By the release from our offices and shops and school rooms and farms, with freedom to act comparatively unrestrained, we accumulate a nervous force which enables us to commence our work again in due time with renewed vigor and will. Civilized man is the hardest worker of all the creatures of the earth. Neither the busy bee, nor the ant, are so high examples of incessant labor as are some of our most successful business and professional men.

The demands of modern civilization are such that, as a rule, success is dependent upon unremitting attention to duty.

In all these excursions and rambles there are few that are so trammelled by conventionalities that they do not turn aside from mere social recreation and admire nature in the varied forms she presents; and a pure enjoyment he is capable of, who, in view of the quiet, the beautiful, or the grand scenes of earth, is inspired with the feeling of the poet who, in similar circumstances, wrote:

"I love not man the less, but nature more."

The nature-loving spirit in man, which the highly artificial business pursuits of our times tend to blight and destroy, is refreshed at these seasons of nature communion, and strengthened into growth, and later may manifest itself, when opportunity presents, by a bit of ornamental gardening in some village corner, or by attempts to beautify with trees and shrubs long neglected village squares and city parks and streets. And the farmer and farmer's wife who for years have given little attention to anything but what could be turned into money, or add to their support, may be led to plant trees to ornament their grounds, vines to clothe the naked walls of the farm-house, screens to obscure the unsightly places, flowers to brighten the door-yard. We may hope then that hor-

ticulture is receiving its full share of benefit, even from the summer recreations of our people, and that the demands of business and the "care of this world" shall not "choke" that love of nature which naturally should be a comfort and blessing to every human heart.

It appears, sometimes, when we read of nurserymens' conventions, seedsmens' conventions, florists' conventions, fruit-growers' meetings and the like, that the only ideas our people could have of gardening, are in connection with some branch of commercial horticulture, and the remark is not infrequent that "Americans only care for gardening when there is money in it." But this is not really true. In a growing country, like ours, and one comparatively poor, the commercial feature of horticulture must necessarily overshadow the æsthetic or ornamental. With a society like that of the Massachusetts Horticultural Society, exerting its influence strongly in favor of ornamental gardening in every branch, and fostering a public sentiment that expresses itself in beautiful cemeteries, tree-lined streets, handsome city and village lots, elegant residence grounds, collections of flowering plants, Palms and Ferns, certainly the Eastern States can not be said to be wholly mercenary horticulturally. Nor is it so with the rest of the country, for this leading of the old, noble Massachusetts Horticultural Society is followed, as far as circumstances admit, in most other States, even in the comparatively new States of the West. So, if we glance at the persons who have been or are prominently identified with horticulture in this country, we shall perceive that, though active in promoting

the industrial or economic feature of horticulture, they have been animated by a genuine love of nature and could be thrilled with a sense of beauty by a plant or flower.

A. J. DOWNING was not less known by his writings on landscape gardening than by his *Fruits and Fruit Trees of America*, and CHARLES DOWNING, it is well known, enjoyed every phase of gardening, though pomology was his life-work. The same remark is true of the late Dr. JOHN A. WARDER, and it applies with equal force to the venerable MARSHALL P. WILDER, who, for many years, has been the head of the American Pomological Society. And so, when we look over the list, we find that HOVEY and THOMAS and BARRY and ELLWANGER and MEEHAN and BERCKMANS, and others, who have become conspicuous in their labors for pomology and fruit culture have, at the same time, both publicly and by private encouragement and example, done all in their power to encourage the true spirit of gardening, which finds in its results, without pecuniary gain, its sole reward.

In thus expressing ourselves it is in no spirit derogatory to the calling of the commercial horticulturist, for we know by long observation that the market gardener, the nurseryman, the florist, or the fruit-grower who is most in love with his profession and enjoys it, will, other things being equal, meet with the greatest pecuniary success.

We hope the time is not distant when amateur cultivators will come forward and take part more actively in all horticultural organizations, both for their own benefit and the encouragement of others.

ANTHURIUM ANDREANUM.

To some extent the Flamingo plant, *Anthurium Scherzerianum*, has become known in this country, being cultivated in hot-houses and with Orchids and Palms, in which situations its brilliantly colored spathes show to great advantage. Quite a number of species of this plant are in cultivation in Great Britain and Europe. One of the most recent of introduction is *A. Andreanum*. The *Anthuriums* are Aroids, natives of Central and Tropical America, semi-aquatic in habit, and require a high, humid temperature.

The spathes in good specimens of *A. Andreanum* will measure six by eight inches. The following description is from *The Garden*:

The annexed figure represents a tufted plant, and those who know *A. Andreanum* only as a one or two-flowered kind may see that when well managed this *Anthurium* will bear at least half a dozen flowers together. We have seen one with eight expanded all at the same time, and we have heard of one bearing seventeen flowers simultaneously.



ANTHURIUM ANDREANUM.

When the spathe first unfolds, its color is bright scarlet, but as it gets older it deepens to a dark brown-red; finally it fades and withers like a dead leaf, but it does not fall away till the flower stalks decay. To our non-botanical readers it may be as well if we explain that, although popularly spoken of as the flower of the Anthurium, the large brilliantly colored spathe is not the flower, nor any part of it, but bears the same relation to the true flowers as the sheath which enfolds the young ear of a head of Corn does to the flowers inside it. The spathe of an Anthurium is primarily the sheath of the flower-head, but in some it is brightly colored for the purpose of attracting fertilizing agents, such as bees, &c. The flowers are arranged in a compact mass all over the finger-shaped spadix, not in the least like flowers in appearance, but if compared with the spike of a Plantago their real character will be at once recognized. At a certain period, soon after the spathe has unfolded, the spadix of the Anthurium becomes covered with whitish, meal-like pollen, and if a soft brush is drawn over this, the flowers will be fertilized, and seeds ought ultimately to be matured. Anthuriums as a rule seed easily, and *A. Andreanum* is one of the freest in this respect. It also crosses freely with other species allied to it, a circumstance which has been taken advantage of by the hybridizers, whose efforts in this direction have been rewarded by several very handsome hybrids.

THE SCARLET WIND-FLOWER.

The Scarlet Wind-Flower, as *Anemone fulgens* is called, has been but little cultivated in this country, though hardy



ANEMONE FULGENS.

enough in some parts. Even in this locality it will stand the winter in the open ground if protected by leaves or litter.

The plant is a native of the South of France, an herbaceous perennial, with palmately divided root-leaves, sending up stems ten to twelve inches in height, each bearing at its summit a flower about three inches in diameter, of a clear, intense scarlet. The general appearance of the plant is shown by the illustration herewith.

One of the most successful ways of cultivating this *Anemone* is to set the plants in early autumn in a sheltered place in a cold-frame, and keep them growing until the cool weather arrives. Then they can be protected by leaves about the plants and by mats over the sash until spring. Give the plants air on all suitable occasions during the winter. They will advance rapidly in spring and bloom early. A bed of them is a grand sight, and the flowers, if cut when just coming into bloom, will expand in water in the house, and last for a week or more. The plants are also potted or planted out in the greenhouse, and kept at a low temperature, under which treatment they bloom the latter part of winter.

WORK FOR THE MONTH.

September, though one of the fall months, is, in fact, one of the pleasantest months of the mild season. The excessive heat has passed, flowers are still blooming abundantly, fruits are ripening, and the trees and lawns and fields are bright with verdure. The garden, this month, is quite as attractive as at any other season, and while we enjoy the fruits of previous months' toil, we are looking forward to new operations that must soon be commenced.

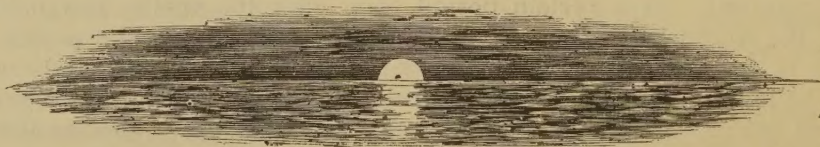
Preparations for new lawns, or reseeding old ones, if not already completed, should be finished as early as possible, so that seeding may be done during the month. If the soil is in readiness it is well to sow grass seed early in the month while the soil is warm, and when it will have the benefit of the fall rains, and good

time to make growth before winter. As the rains will bring down from the trees, this month, some of the leaves that are about ready to fall, more than usual care will be needed to keep lawns and walks tidy, but such attention should not be neglected on any well kept place.

Strawberries can be planted through the month, and if well cared for and protected through winter, will be in good condition for an early start in spring.

The old canes of Raspberries and Blackberries can be cut out and destroyed.

At the North, Spinach seed should be sown from the middle to the last of the month. It should be given a rich, well drained soil deeply worked. Sow in drills from fourteen to eighteen inches apart and an inch deep.



CORRESPONDENCE.

ASPARAGUS—PRIZE ESSAY.

The first thing to be done by one who wishes to grow Asparagus for market, is to see if he has any soil that is suitable. It should be a light loam and as deep as it is possible to obtain. Asparagus will grow on almost any soil, but I do not think that its cultivation will prove profitable on a heavy clay soil, nor where a stiff clay subsoil comes up within a few inches of the surface. It can be made profitable on very light sand by the use of plenty of manure.

The next thing is to arrange for a supply of plants. These can either be purchased from some nurseryman, or can be grown from the seed on one's own land. Dry Asparagus seed when sown in the open ground, is very slow to germinate, and it is difficult to prevent the weeds from taking possession of the ground before the Asparagus plants appear. My own plan has been to soak the seed in hot water until swollen and softened before sowing. It should be sown in long rows a foot or more apart, so as to be tended with a hand or horse cultivator. If a few Radish or Cabbage seeds are sown with the Asparagus they will come up at once and show where the rows are, so that they can be cultivated before the Asparagus appears. Some growers, after soaking the seed, put it into a coarse bag and bury it deep in the ground until it begins to sprout, and then when sown it comes up immediately. Whichever plan you adopt, be sure and keep the plants clear of weeds through the season. As you are growing the plants for your own use, you will want them to be as large and strong as possible, therefore sow plenty of seed, and then when weeding them, thin out the plants to about three inches apart. To make good plants the soil must be very rich, so do not be stingy with your manure.

During the season, while your plants are growing, you should prepare the permanent bed. It is not necessary, as was formerly supposed, to dig out all the earth to the depth of two or three feet

and then fill in the bottom with all manner of trash and fertilizing material, such as old boots, bones, &c. The land must be deeply plowed and thoroughly pulverized. It cannot be made too rich; with the possible exception of Rhubarb, Asparagus is the most gross feeder of any vegetable in cultivation. A successful market gardener in Illinois, writing, some years ago, upon the raising of Asparagus for market, used the following language: "The profits are just in proportion to the amount of manure used, which should be more than most people think enough." This is strictly true. He also said, "Study economy in the processes of labor, using the horse instead of the hand, and the rake instead of the fingers, whenever possible, but be unsparing of manure." No better advice than this could possibly be given, and the grower may expect that his success will be exactly in proportion to the fidelity with which he follows these directions. The kind of manure and its mechanical condition when applied to an old bed are not material. Fresh stable manure may be used, no matter how coarse so long as it can be plowed under. But in preparing the ground for a new bed fine, well rotted manure is to be preferred. Asparagus always starts into growth very early in the season, and the bed should be plowed late in the fall that it may dry out and be ready to work as early as possible the next spring.

The proper distance between the rows and between the plants in the rows is a matter of dispute. Years ago the rule was three feet between the rows, and from twelve to eighteen inches between the plants. This is universally conceded now to be too close, two by three or four feet, usually the last, is the closest planting allowed. Many set their plants four feet apart each way and cultivate the bed both ways. The growers of the celebrated Oyster Bay Asparagus make their rows five or six feet apart and set the plants two or more feet apart in the

rows. In planting, the crowns should be set at least three inches under ground, and in many places four or five inches would be better.

The first season all that is necessary is to keep the bed clear of weeds and the surface mellow. In most parts of the north winter protection is a great benefit. If there is no danger of injury to the plants from severe cold still a heavy mulch, put on before the ground freezes, will keep all, or nearly all, the frost out of the soil, so that the bed will start very much earlier in the spring. A thick coating of fresh stable manure is the best possible mulch, and that is also an excellent way to apply manure. The coarsest of the litter should be raked off in the spring and the balance plowed under. This may be supplemented by the application of a few hundred pounds per acre of some good commercial fertilizer. Ground bone is one of the best.

The question, whether salt is needed on an Asparagus bed, is by no means settled. While some claim that it is necessary and should be applied every year, others say that Asparagus does not need salt any more than any other vegetable. Without undertaking to decide the question, it is certain that Asparagus is not injured by the application of sufficient salt to destroy almost all other vegetation near it. If not specially useful as a fertilizer, the free use of salt on an Asparagus bed is an advantage; it has a tendency to prevent the growth of weeds, and by attracting moisture from the atmosphere helps to carry the bed safely through a drouth. Coarse or refuse salt may be applied every spring, and enough can be used to make the surface of the soil look quite white. Old brine from pork or beef barrels may often be obtained without expense from butchers, but care should be used in applying it, for it is possible to kill Asparagus plants with brine, as I know from personal experience.

In the spring, run a cultivator along the top of each row two or three times and then harrow, that the soil over the plants may be very loose. Between the rows stir the soil often enough to keep it mellow and clear of weeds until the tops shade the ground. The second year a little Asparagus may be cut, but be very careful not to continue the cutting too long. The third year a little more may

be used, but a full crop cannot be expected until the fourth year. It is a good plan each year, when you stop cutting, to apply at that time a liberal dressing of stable manure or fertilizer and cultivate it in; the object of this is to insure a strong growth of tops and roots during the summer and fall, for the amount of the next crop depends upon the growth made this fall. In autumn, just before the seed balls are ripe enough to drop off easily, mow all the tops, haul them away and burn them; otherwise the ripe seed falling upon the bed will grow there, and young Asparagus plants are very undesirable weeds anywhere and especially so in an Asparagus bed.

Oyster Bay Asparagus is very popular in New York city; it is all white, being cut eight or ten inches under ground as soon as the top shows itself above the surface. They make their rows five or six feet apart and set the crowns very deep under ground. Every spring they plow up the earth between the rows until it is very mellow, and then with plows and other tools specially contrived for the purpose, they ridge up the earth over the rows until the bed looks very much as if it were intended for planting Sweet Potatoes, except that the ridges are broader and are not sharp but rounded off rather flat. Though this blanched Asparagus sells for a higher price in New York city, yet as it costs much more in time and labor to grow and gather it, I doubt if it would generally prove any more profitable than that grown in the ordinary way.

Asparagus should always be cut a little below the surface of the ground, if for no other reason than that the sharp stubs left may be out of the way. Asparagus knives are advertised which are quite broad and are sharpened across the end, and are intended to cut by shoving straight down against the stalks; but this form and all common knives become dull so soon that it is necessary to carry a whetstone constantly, and to use it every few minutes. Some of the large growers on Long Island use a common heavy knife having a few teeth, like saw teeth, filed into the edge near the point. Such a knife can be used for half a day without becoming too dull.

The stalks must always be cut before the heads show any signs of breaking or

branching out; the lengths should range from six to ten inches. The size of the bunches must depend upon the market in which it is to be sold; for New York city they should be four or five inches in diameter, about seven or eight in length, and should weigh from three to three and one-half pounds. To put up such large bunches in good shape requires the use of a regular bunching machine, which costs from three to four dollars. In western markets the size varies according to the taste of the growers. For Chicago market a good salable size is about three inches in diameter and from six to nine inches in length. Great pains should be taken to have the tops exactly even, and after the bunch is tied up the bottom should be cut off square, so that all the stalks will be of exactly the same length. The bunches should be tied in two places, near the top and near the bottom. The tying material must be broad and soft, common twine will not do, as it cuts into the stalks too much. I have seen it tied with strips of white cotton cloth, having the name of the grower printed upon them, so that every bunch sold advertised his business. Bass bark is one of the best tying materials, and is probably most commonly used.

If the crop is to be shipped to a distant market it is packed in crates with tight

bottoms, but with slat sides and tops. The crate should be large enough to hold three or four dozen bunches, and just deep enough for one layer of bunches when standing upright. The Asparagus should be perfectly dry when put into the crate; this is indispensable, otherwise it will surely heat and spoil, and it should be packed so snugly as to prevent any shaking about in the crate, which would perhaps cause the tender tops to be broken off, thus rendering the Asparagus unsalable. Shippers from Charleston and other Southern ports often put a layer of perfectly dry moss over the bunches to protect the tops. When shipped a long distance, a layer of wet sand or moss in the bottom of the crate, on which to set the bunches, will help to keep them from wilting.

The profits of growing Asparagus depends so much on soil, manure, cultivation and market that it is difficult to fix on any reasonable average. The range is all the way from \$100 to \$1000 per acre; the average is probably much nearer the first figure than the last. Usually, however, that is the fault of the grower. If he is stingy of manure and cultivation, he illustrates the old adage, "He saves at the spigot and wastes at the bung-hole."

W. C. STEELE.

ARRANGING CUT FLOWERS.

In order to have our plants healthy and productive the flowers they bear must be continually cut and removed, lest they mar greatly the prospect for future bloom. This is but a reasonable conclusion. But what to do with the flowers themselves. Every lover of these, especially one who has ministered to their wants, knows well their value. Pity it is that we cannot all be so blest as to have that wonderful knowledge or skill that can take the humblest flowers and add to them a marvel of beauty and grace by some simple arrangement of them. But we are not all so. Much may be gained by practice and observation in the arrangement of cut flowers. It takes time and patience. It is best to begin with a few buds and blossoms at a time, blending the colors carefully and noting the effect. In the simple wearing of little nosegays or a handful of the same va-

riety of flowers much knowledge may be gained. Here we see a graceful young girl with a half-opened rose-bud upon her dress, the effect of which is most charming. Another would have worn it carelessly, and the effect would have been lost. And so, here and there, some one has caught the happy idea of filling a tiny vase each day with fresh flowers for the home. Just try it and see. A whole world of happy trial opens out from it. What a new and charming thought is presented each day to the observer of it. From this simple daily pleasure grows a new grace of basket and vase for church offering and sick room. Month after month, garden and conservatory, or, may be, only a few window plants well cared for, supply the material for our skill. Sometimes 'tis but a grouping of royal Pansies, whose faces smile up at you in saucy fashion as you sigh, "Ah, if I only

could." Roses, Mignonette, Ragged Robin, and what not, all take their turn. But, over and over again, 'tis but some exquisite thought wrought out in each. Even a tangle of wild Sweet Brier serves our purpose. I have noted also that this fortunate, or unfortunate, personage who has acquired this much coveted skill has plenty to do. Here comes the conscienceless friends who beg a bouquet made, a wreath for a funeral, or a basket filled for a church festival, and so on. Their ideas are as dull as their fingers are clumsy, yet they know the difference between a beautiful masterpiece of art and a jumbling of nature's graces. RUSKIN gives us the thought, "that flowers

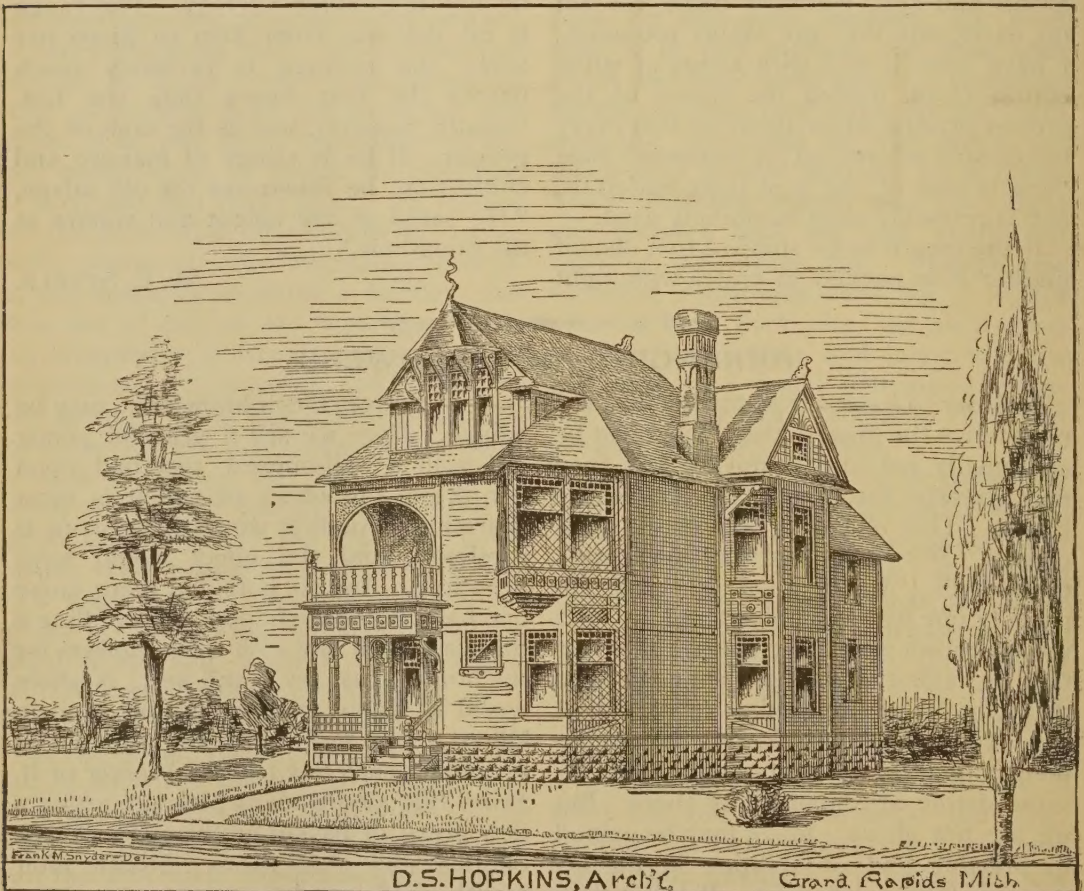
only rightly flourish in the garden of some one who loves them," and I verily believe it holds good with their arrangement as well.

Make a study of the flowers as they grow, care for them—love them, if you will—and then try their arrangement. Let the amateur note the effect of certain colors combined, and the happiest results will surely follow, and time will prove the old theory that "only practice makes perfect." Just see the Golden-rod and Scarlet Sage, each a wonder in itself, yet with happy grouping a new and deeper effect is gained. And so it is through the whole varied series of color and form of our floral beauties.

H. K.

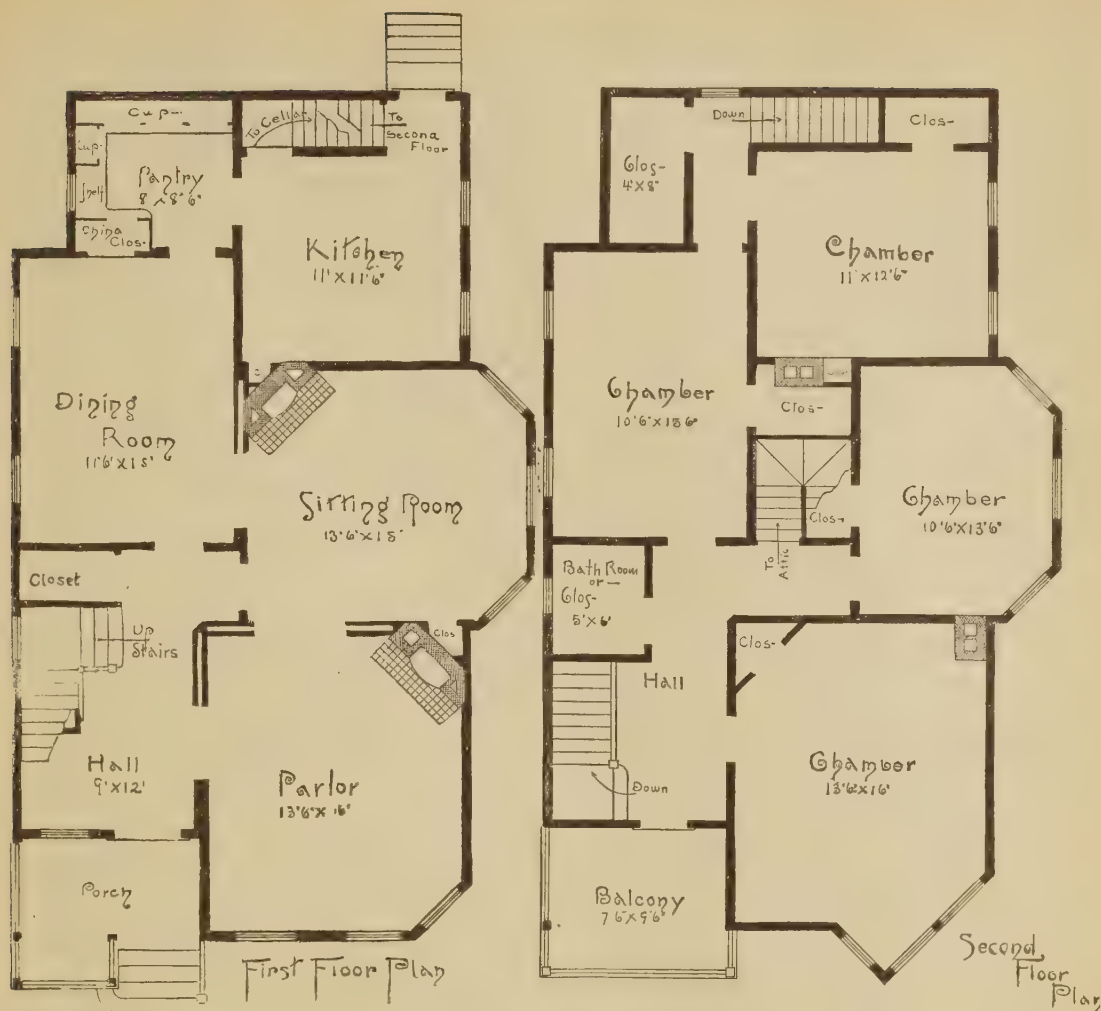
A VILLAGE RESIDENCE.

The design for a dwelling that is here presented has been made for a narrow lot. The house will occupy a space of twenty-eight feet by forty-nine feet over all. This plan, although not particularly new in its general arrangement, is a very convenient



FRONT ELEVATION.

one, and one that meets the wants of many persons. It is compact and economical, and supplies room for a good sized family without a great outlay of money. The exterior is plain and neat, and the details are simple and cheap. In the attic a good sized room can be finished off, if desired. This house, built of wood with



stone foundation, sheathing outside, and with paper lined under finish, Pine finish interiorly, no plumbing or heating, will cost from \$1800 to \$2300, according to location. Any further information in regard to any particular feature about the design will be cheerfully given by enclosing stamp, and making inquiries of the writer.

D. S. HOPKINS, *Grand Rapids, Mich.*

NAMES OF FRUITS.

Under this title we observe, on page 224 of the July issue of the *MAGAZINE*, certain criticisms upon the recent "Rules of Pomology," and the discussions that have recently arisen respecting their practical application, which, to us, leave the conviction that the scope of these rules, and the action of the society under them, have been but imperfectly apprehended.

Unquestionably, to in any way abbreviate or simplify old and honored names of fruits is to take a great liberty, and one only justifiable from the fact that words may have lost their original significance, or that the present practice of pomologists furnish a warrant for such action, one or both.

The closing remark of the first paragraph would seem to imply that such changes have been carried so far as to endanger the identity of some varieties—an assumption which, to us, seems not warranted by the facts. To quote certain of the most extreme of these changes—Duchesse d' Angoulême is shortened to Angouleme; Fondante d' Automne becomes Lucrative, which has, in America, always been the name more commonly employed, with only the addition of the, to us, unmeaning prefix, Belle; Beurre d' Anjou becomes Anjou, which, in common parlance, in our country, has always been mere or less frequently in use. If there are other changes more likely than those to endanger the identity,

either with or without "the society's key," we will be happy to be reminded of them.

We do not claim, or even admit, that "the society has a right to do this," save as the representatives of the pomologists of the country, and in accordance with the tendency of their practice.

"That the originator or introducer (of a fruit) has the right to give it a name," is not only not denied, but, instead, is distinctly affirmed in the first of the rules in question. These rules do not even deny the right of the originator to impose such names as Hog-pen, Sheep's-nose, Big Bob, or others of similar character, but merely provides that such names shall not be tolerated in its discussions nor yet permitted to appear in its transactions.

In its fourth and fifth paragraphs, the article seems to assume that the rules in question insist that the name of a fruit shall consist of a single word only, and that such word must indicate "the characteristics of the variety, the name of the originator, or the place of its origin." We will not, in any sense, assume to speak for the society; but, as the framer of these rules, and chairman of the committee from which they emanated, we may be warranted in stating that, from the terms of rule first, and from the very nature of the case, the above quoted paragraph could only be intended to be ad-

visory, so far as originators of fruits are concerned, although mandatory in so far as pertains to the action of the Society, which merely "reserves the right in case of long, inappropriate, or otherwise objectionable names, to shorten, modify, or wholly change the same when they shall occur in its discussions or reports; and also to recommend such changes for general adoption."

From the nature of the case, this rule has an application in the case of new originations only, and that upon their first consideration by the society. This we understand to be a thought, (possibly it may be said to be a rule,) underlying the nomenclature of the sciences. To imagine an extreme case—should the discoverer or originator of a botanical novelty attempt to impose upon it a profane or obscene, or even a coarse or otherwise offensive name, is it supposable that botanists, as a body, would tolerate its use and concede it an unquestioned place in the literature of the science, or would it not rather be ignored as an abomination, and consigned to the abyss of forgetfulness? True, botanists, as a class, are persons of refinement, and little liable, therefore, to transgress in this direction; but pomology is somewhat less fortunate in this particular, hence an increased necessity for rules to regulate and direct their action.

T. T. LYON.

RELATION OF STOCK TO SCION.

It has long been a matter of dispute amongst nurserymen and fruit-growers whether the stock upon which a scion is grafted exercises any influence upon the character of the fruit of the tree or limb grown from that scion. Many utterly scout the idea of any effect upon the fruit being produced in that way, and if differences are pointed out to them they are attributed to soil, season, or some other cause. With careless observers such explanations are, perhaps, satisfactory, but to any orchardist who has carefully studied the matter, facts accumulate which make it more and more apparent that something besides soil or season is often at work to change the fruit of the scion from its normal character, and this study of the subject with an unbiassed mind always tends to the conclusion that the

stock does, in many cases, greatly change the character of the fruit produced from the scion.

These variations in grafted fruit are from nothing to very wide. Let any one go into a large bearing orchard of top-grafted Baldwins, Greenings, or any standard Apple, at gathering time, and he cannot fail to notice great variations in size, color and quality of the fruit, even from trees growing side by side. According to my experience and observation these differences are very much more marked in top-grafted than in root-grafted orchards. In the New England States top-grafting, especially for the standard fruits, is so general as to be nearly universal, while in New York, Ohio and Michigan the orchards are mainly set with root-grafted or budded

trees. I think any large dealer who has handled Apples from these different sources will testify to the much greater uniformity and truth to character of western over eastern Apples, and I know of no general cause to which it can be due other than these two modes of grafting. It seems reasonable, too, if the stock does modify the graft, that the more there is of the stock the greater the change will be likely to be. I say "likely," because marked modification is not universal, or even general. If the stock resembles the scion in the texture of its wood, its habits of growth and the quality of its natural fruit, the change will not be noticeable, while if there is marked difference in these particulars, a corresponding difference is apt to be found in the fruit.

My attention to this matter of what may be called "graft crossing," was awakened a great many years ago, when I was a boy, about the year 1838. I was then extremely fond of the Sops-of-Wine Apple, known also as Bell's Early. My grandfather had a large orchard, but no Sops-of-Wines, and at my urgent request he grafted scions of that variety into branches on half a dozen trees for my benefit. I watched these scions anxiously for fruit, and in three or four years they all bore. But I was greatly disappointed to find that this fruit, though externally appearing to be Sops-of-Wine, was hard, green-fleshed, and miserable to eat. There was but one exception, and that was upon a Pound Sweet tree, the others being upon Russets. This Pound Sweet graft bore very large, handsome and excellent Sops-of-Wines, but the rest were worthless.

Some thirteen years ago, I was speaking of this to the late ALBERT NOYES, of Bangor, Maine, who said he had had many similar experiences, especially in getting extra sized fruit for exhibition by grafting upon Alexander, all varieties seeming to grow larger and handsomer when so worked. But this size was got at the expense of quality.

A more curious matter still is, that by grafting "in and in" upon the same tree the change produced can be much intensified. By "in and in" grafting, I mean grafting a scion upon the limb of a tree, then next year taking a scion from the graft and grafting it into the same tree; next year take a scion from the second

graft and insert it in the same tree. This may be repeated again and again, the result being that you will have all grades between the original fruit of the graft and the original fruit of the stock. To be quite successful there must be difference enough between the stock and first scion to start a change. But by in and in grafting the effect is often so marked from one year's graft to the next, and so on, as to make a positive demonstration of the actuality of this which I call "graft crossing."

R. DIBBLE, of Brantford, Conn., was the man who, in June, 1873, first called my attention to this method of intensification of the graft cross by grafting in and in. He wrote: "About forty years ago, my father had a large and thrifty Apple tree which bore exceedingly sour fruit. I helped him graft a part of it from a very sweet Apple standing near. The second year we grafted another part from the scions set the previous year. The third year we grafted the rest of the tree from the second setting. These grafts produced three different kinds of fruit, all differing from each of the original stocks. The first strongly resembled the sweet Apple, but were only moderately sweet. The second were slightly striped, like the sour Apple, and neither sweet nor sour, while the third were clearly striped, and a moderately sour Apple." Mr. DIBBLE adds, "No man can graft a Rhode Island Greening on a sweet Apple stock and another from the same on a sour stock, and have the same fruit in appearance and taste as the original from each tree. To say the least, I have never been able to do it. I have a number of them, but no two are alike."

In grafting common Apples upon Siberian Crabs the cross is so violent that these effects are very often seen, and as this is done to a considerable extent in my neighborhood, I have frequent opportunities to see what remarkable changes are thus effected in size, color and quality of fruit.

T. H. HOSKINS, M. D.

EFFECT OF STOCK ON PEAR GRAFTS.—In the *Rural New-Yorker*, A. D. MORSE relates that he grafted Winter Nelis on trees of Bloodgood and Flemish Beauty. The fruit of Winter Nelis produced on the latter were yellow brown, and ripened in December; that on Bloodgood was green in color, and it kept through January.

THE HOLLYHOCK.

I sometimes think our best perennial plant for the border is the Hollyhock. I always think so when admiring a well grown clump of these magnificent plants standing by themselves, for when there is no other flower near to divide one's

recognize the popular varieties of to-day. I can easily remember when the term Hollyhock meant a tall-growing, rampant plant, bearing long spikes of rather coarse single flowers, which were valuable in producing a strong color-effect,

but had to be kept rather in the background by those who were fond of delicacy in quality and appearance. The old Hollyhock was chiefly valuable for use among shrubs, or as a background for smaller plants, but it was popular and deserved to be, quite as much as many other plants of the "good old days." It is somewhat strange that it did not sooner receive the attention which florists have given it of late, for it was plain to be seen that it was a plant with "great possibilities." These have been developed to such an extent that we have now a Hollyhock which produces most brilliantly colored blooms, from which a large share of coarseness has been eliminated, and a good proportion of the plants raised from seed will give double flowers; and, unlike many plants which have been coaxed into becoming "double," the Hollyhock has been improved thereby.

To produce good flowering plants for next season, I sow seed of the Hollyhock in June, in some place where there will be partial shelter from the sun. After the first season's growth, this flower seems to be fond of the sunshine, but young plants, I am inclined to think, prefer a somewhat shady location. I thin out the plants, allowing

attention with, it is hard to believe that there can be anything finer than the improved varieties of this favorite old flower. This is one of the plants which careful and skillful cultivation has so changed in many ways that a person who was familiar only with the Hollyhocks of our grandmothers' time would hardly

at least a foot of ground for each plant to grow in during the summer. In October I remove to the places in which they are to bloom next year. I lift them carefully with a spade, taking pains not to disturb the roots in removal. The plant is a strong feeder, and I use a great deal of well decomposed manure about them,



DOUBLE HOLLYHOCKS.

but I do not put this immediately about the roots. I prefer to have a mixture of loam and sand in contact with the roots, and let the manure surround this. They will appropriate the nutriment from it quite as well as if planted directly in it. In November I cover with evergreen branches to a depth of eight or ten inches, preferring this to litter, as it will quite as effectually prevent the alternate freezing and thawing which injures any plant so much, and is not as likely to smother the plants beneath it. If litter is used, it should be coarse. I find that the Hollyhock does not flower very satisfactorily after the second season, and therefore prefer to raise new plants each year.

The double varieties can be made very effective by planting them in groups on the lawn. Last season I had a circular bed on a knoll at some distance from the path, in the center of which I planted Perennial Larkspur of the darkest blue varieties. About this I put the delicate lemon yellow Hollyhocks, and the effect

was wonderfully striking and satisfactory. The contrast between the colors was all that could be desired, and a great many persons stopped to ask what "those flowers were?" A large bed filled with white, yellow and scarlet varieties is about as brilliant as anything I know of. A single plant has a dignified and stately effect, but a good deal is gained, especially in large grounds, by massing them. If one does not care to grow a succession of young plants, the old plants are greatly benefitted by dividing the roots every spring, cutting out the older portions of them, and reserving only the strong and healthy ones. If one does not care to take the trouble to raise the plants they can be procured of almost any florist. For use in large vases, for the parlor, we have few flowers better than the Hollyhock. The stalks can be cut in any length to suit, and the flowers will keep fresh for several days, if the water they stand in is changed every morning.

EBEN E. REXFORD.

SPOTTED CALLA.

A few years ago I received a letter with two bulblets wrapped in tissue paper inside, the larger was crushed. The little bit of bulb I potted in fine, light soil, not rich; it grew a little all winter, in spring I repotted and it grew finely, and showed its spots. So I read up all I could, and set the pot away in the fall after it ripened its leaves. The next March I again had the bulb repotted. In May it had five nice leaves and a lovely flower, which I did not cut away. After a few weeks I found it was seeding finely, so I let them ripen. In fall, when the stem dried, I cut off the ripe head and placed it in a small box on the earth in the Calla pot, which was a two quart stone, and it remained there until March again, when the bulb was repotted as before. The seed, sixty in number, were carefully planted, and fifty came up. I gave ten away while young, to a cousin, and had forty little bulbs, which were packed in sand in a box, and went into the tender bulb chest, which is looked at every few weeks through winter. The next spring they were bedded. This year, the old bulb bloomed and ripened the seed again. Now, this spring, at five years old, my Calla has a blossom gone past on one side, a fresh bud coming

on the other side, twelve spotted leaves and six small offshoots at the base. I did not expect it to bloom, but it will give me two blooms; the leaves are not as large as last year yet, but will grow larger. I use about one-third leaf-mold with good light soil, and about one-sixth clear sand. I find my plants do a great deal better since I left out the part old manure. We get in too much for so small a lot of soil. After a time a dust of bone dust or liquid stimulant can be given, if needed. I use the pots one-fourth full of moss at bottom. I have eight seedling Callas two years old bedded out with Geraniums, and one is in bloom, and I think another is budded; they look pretty and are all growing finely. My last year's seed, about fifty, I have planted in a drill under a young Grape vine, and they are now quite a fine lot of young plants. I shall lift all the bulbs, large and small, and pack in sand, this fall, dry off those in pots. I have found it a very easy plant to care for, and it is neat, handsome, and very fine for any place. The Calla is a favorite of mine. I have some good plants, and am much pleased with this little spotted variety also.

HATTIE, *Sunny Side Farm.*

FOREIGN NOTES.

HOLLAND AND ITS BULBS.

Over the signature of "A Wanderer," a description is given in a late number of the *Gardeners' Chronicle* of a visit, last spring, to some of the large nurseries and bulb-growing establishments of Belgium and Holland. From this source is taken the following extract:

I have several times seen the question raised, Why cannot Hyacinths and Tulips become articles of commerce in England as they are on the continent? Are there not large tracks of land which are as good for this purpose in our own country as those on the continent? I dare say an affirmative answer might be given to this question, but it would not settle the matter. Later on I was talking to Herr MAX LEICHTLIN about this very point, and his reply to my question went down to the very roots of the business. He simply uttered the word "experience," and experience gives the explanation of all things. A Dutchman has been familiar with the mysteries of bulb growing from his youth, and there is no trouble which he is unwilling to take regarding it, and there are no minutiae which he considers to be too small to attend to. M. ROOZEN showed me in one of the fields through which we were passing, a barrowful of sick Hyacinths which had been condemned, and were presently to be thrown away; but whoever could have picked out those sick bulbs from their fellows who were doing well but one whose eye had been trained to it by long years of practice, and one who could "spot" spot in a moment? I saw what he referred to when I took the Hyacinths into my hands and handled them carefully, but as to marching through several acres of bulbs and condemning the worthless ones at first sight, it would have been easier to fly; and yet apparently common laborers were doing this without any effort at all. I have often heard the question raised in England if bulbs like manure or not? and unless my memory is deceptive, the answer is often returned in the negative. The highest authority that we have for

Lilies, I think, has said that with the single exception of *Lilium giganteum*, no Lily is in his opinion ever benefitted by manure. It may be so, but it is not the practice of Holland. Sand and manure—manure and sand are the alpha and omega of all things. It should be said that of course the manure is in a very decomposed state, but a Dutchman relies upon it implicitly, and the fields are enriched not only in the first instance, when they are recovered from some barren waste, but again and again, so that fertility may not be impaired. A bulb, it is true, does not like to lie in manure—it should be cushioned in sand, and the roots should push downwards into the rich provision from which they get vigor and life. This tends also to keep them from being ever burnt up in the summer. It is when the rootlets have nothing proper to feed upon that they come too much to the surface, and they cannot then stand the burning rays of the sun.

An emphasis should be put on the thorough decomposition of the manure, but it cannot be bad practice to use it in this way when such good results flow from it. Not to speak of Tulips and Hyacinths, I saw fields and fields of Lilies, which were perfectly innocent of shade, and yet doing quite well after this fashion.

It was most interesting to be initiated into the ways by which Hyacinths are mostly increased. Two methods are commonly used. A threefold incision from the base upwards may be made in the bulb, or the bottom of it may be scooped out altogether in the form of a cup. In the latter case, the shape of the bulb will be best, and they come in quantities about the size of small Peas, and have to be grown on and on for a very long time. Hyacinth growers seem to recognize three distinct sizes for the market, of which the best and the costliest are for the most part sent to England. It takes six years before such bulbs are sent out, and they are during that period shifted several times from one kind of soil to another. In addition to all this, it would almost require a lifetime to have

the properties—such, for instance, as their lending themselves easily to be forced, their readiness to multiply, &c.—of an innumerable army of Hyacinths, Tulips and Anemones at one's fingers ends. M. ROOZEN estimated his Anemones alone at a million.

It would baffle all computation to give the slightest idea of the number of Narciss, Tulips, Hyacinths, and of all sorts and kinds of things which are grown by him. But truly it was a gorgeous sight to gaze on the morning of a cloudless day on those great breadths of color. Can anything in point of mere color go beyond a Tulip field when every petal is thrown back to the sun, and they seem to be drinking in his rays. It is questionable whether anything could make a more vivid impression on the visual organs than they do; when looked at for any length of time they become quite dazzling. I feel as though I had never seen red or yellow before until I went to Holland.

CROWNING THE ROSE-QUEEN.

The tenth annual Rosière fête and fancy bazaar in connection with the Work Girls Protection Society, which has its home at Walworth, took place at the Crystal Palace on June 21, and was patronized by a large number of the friends of the institution. Among those present at the interesting ceremony of the crowning of the Rose-Queen were the Duchess of Marlborough, Lady COLIN CAMPBELL, Lady FOLEY, Mrs. ERNEST HART, and the Rev. Father NUGÉE, the founder of the society. The custom of crowning the Rosière dates its origin from the year 525, when it was instituted by St. MEDARD, Bishop of Noyau, France; but in the course of three or four centuries, owing chiefly to the stringent conditions required of the candidates, it fell into disuse. It was, however, revived under the patronage of Louis XIV, and is still kept up at Nanterre. In the case of the Walworth Rose-Queen, Father NUGÉE selects the work girl who has most distinguished herself for her good character and industry, and his selection is afterwards submitted to the votes of the club girls and final approval of the assembled congregation, after which she receives the Benediction before them in the church. Father NUGÉE's selection this year was ap-

proved on Sunday night with hearty unanimity. The institution of the Rose-Queen in this case is a source of much good, as it enables Father NUGÉE, year after year, to bring before the public the hard lot of the ill-paid work girls and seamstresses of London.

Gardeners' Magazine.

FLORAL WREATHS.

The most appropriate and graceful of these are simply woven by loving fingers at home. Bought flowers have no such associations as those which linger around the blossoms of one's own garden, and perhaps the poorest kind of paid-for sadness is that represented by the cumbersome wreaths and crosses of the flower shops. When the late J. C. LOUDON was buried at Kensal Green, in 1843, just as the coffin was lowered into the grave a stranger stepped forward and threw in a few strips of Ivy. It was the tribute of respect offered by a poor man whom the great horticulturist had once befriended, and the act had in it that true human feeling which is the very soul of poetry. We have all heard of the famous horticultural lady, who, while growing the finest of exotics in her conservatories, always purchased the flowers which she gave away; but who would think of giving bought flowers to a bride, or of offering them in respect to their dead friends if they had a leaf or flower of their own to give? At funerals more especially is floral millinery in bad taste. If our joy or grief be sincere, let it be expressed by real flowers simply placed together with a few fresh green leaves. The American florists are in some cases worse than our own, but even in America floral designs of the cart-wheel or the windmill types are avoided by people with any pretensions to good taste.

VERONICA, in *The Garden*.

ACRES OF NARCISSUS FLOWERS.

A writer in the *Gardeners' Chronicle* makes a brief sketch of a flower farm near London, to supply Covent Garden with some kinds of cut flowers, the Narcissus being one quite important kind.

"A visit to Mr. WALKER's flower farms at Whitton, near Richmond, during April and May (but especially in April), must be a new experience to most growers of hardy plants. The immense scale on

which these plants are grown fills one with wonder; how, for instance, the thousands of such kinds of *Narcissus* as *N. Horsfieldi*, *Emperor*, *Empress*, *Sulphur Crown*, &c., and still more the tens of thousands of *Maximus*, can have been got together! and also such fine masses of *Sir Watkin*; *Mary Anderson*, &c., amongst the later introductions. Almost more surprising are the thousands beyond count of the *Ornatus* and *Recurvus* varieties of *N. Poeticus*, *N. incomparabilis*, &c. It may give some idea of the extent to which *Narcissus* culture is here carried to mention that about twenty acres are devoted to it.

"From *N. pallidus præcox* to *N. poeticus recurvus* a long succession of flowers is secured, and in the same way, though to a less extent, a succession of *Tulips* are grown, some four acres being devoted to them. Beds four or five hundred feet long, of their various brilliant and soft colors, are a beautiful sight.

"Choice *Narcissi* grown by the acre, not for the sale of the bulbs but of the blossoms, is a phase of *Daffodil* culture which almost requires to be seen for its singular effect, to be in any degree realized."

SULPHIDE OF POTASSIUM.

In consequence of what I read concerning this last spring, I determined to give it a trial, and so far as I have been able to judge it is a sure and safe remedy for mildew. Seeing that we were going to have rather a bad attack of this pest in one of our *Strawberry* pits, I dressed the plants in the customary manner, leaving several frames to be done with the sulphide. These were done, one-half at the rate of a quarter of an ounce to a gallon, the others double that strength. In each case the mildew was killed, and the fruit came off quite clean. Moreover, I found no trace of injury done to the foliage; whereas, when sulphur is used, and a few hot days come directly after, it is apt to get burnt. Another year I should have no hesitation in using this remedy extensively. Rose growers ought to find in this sulphide a boon, for sulphur is not only unsightly, but dangerous. And here I may remark how fully I am convinced that injudicious ventilation is one of the chief causes of mildew attacking plants. Cold draughts or drying currents of air

passing over the foliage for any length of time, will be almost sure to bring it on, while the preservation of a genial, growing atmosphere will, in a great measure, ward it off. I spoke lately to a Rose grower of great experience upon this subject, and he assured me that he had known a few hours of inattention in this matter bring on a bad attack. With plants, as with human beings, nothing seems more deadly than a chill.

B., in *Gardening Illustrated*.

GLOXINIAS FOR AUTUMN.

Gloxinias can be had in flower in abundance during the autumn months if treated in the following manner. About the middle of June place some *Gloxinia* leaves in small pots, using a light compost, such as leaf-mold and a good sprinkling of sand, plunge in a steady bottom heat, keep a moist atmosphere in the house or pit, but not too moist, or the leaves will damp instead of making roots freely. When they have rooted, transfer them into four-inch pots. Use for this potting two parts good fibry loam, one of leaf-mold, and one of sand, also adding some well-decayed cow manure if it is to be obtained, not made fine, but in lumps about the size of a walnut. After potting, place them again in a brisk bottom heat, keeping plenty of moisture around them. Be careful in watering till the roots have taken possession of the new soil, then, every third watering or so, give weak liquid manure, and, if so treated, good results may be anticipated, and would serve to keep up a succession of bloom. Some flowers produced by plants grown in the manner stated were in the hand bouquet which was awarded the first prize at one of the leading *Chrysanthemum* exhibitions held last November.

G. GARNER, in *Journal of Horticulture*.

RAISING GLADIOLUS IN WATER.

The French have practiced raising the *Gladiolus* in vases of water, after the manner of *Hyacinths*, and found it successful. The bulbs are said to bloom in less than half the time usually required when raised in the open ground. There is a difference in the way the several varieties submit to this treatment; those with red flowers or shades of red as the foundation color, develop a weaker root sys-

item, and the roots are more liable to decay, and their stems develop with more difficulty than the varieties with white flowers or a foundation of white.

The culture of the *Gladiolus* in this manner is said to admit of its production very early in the season, as it can be started by the middle of January; by starting the bulbs at intervals through the winter and spring up to the time they can be planted in the open, and again commencing the latter part of summer, a continuous supply of the flowers can be obtained from early spring to the end of autumn. It will be found, probably, that the bulbs can be as successfully bloomed in moist moss or sphagnum, as *Hyacinths* are sometimes treated, and this course, under some circumstances, will be preferable.

DOUBLE FUCHSIAS.

For small pots these *Fuchsias* are by no means well suited, and even for pillar plants, in the conservatory or in similar structures, some of the free-growing, small, or medium-blooming kinds make a better and more lasting display than kinds with abnormally large flowers; yet these latter are worth growing for the sake of variety—indeed, admirers of huge blooms view them with special interest. It is now many years since a tall, straggling kind, with large, dark colored flowers, called *Norfolk Giant*, made its appearance; but the blooms were borne so sparingly that it never became popular. More recently we have had *Champion of the World*, an upright growing variety, with a large double corolla of a dark purple color. The stalks of the flowers, in the case of small plants of this sort, are, however, too long to set off the blooms to the best advantage; but better results are obtained when the plant has plenty of room in which to develop itself. This

is a variety raised in England, but one from the Continent (*Phenomenal*) is about its equal as regards size, and of rather more sturdy growth; still, even this is better suited for a pillar than for a pot plant, though in eight-inch or ten-inch pots it flowers fairly well, the huge, massive blooms being then very striking. Another free-growing kind is *Nouveau Mastodonte*, a variety with a purple corolla flaked with red, and, like the two preceding, of upright, vigorous growth. Among light colored flowers there are none with massive blooms; but of those with white corollas, *Madame Jules Chrétien* forms a good companion for those just named. Of a less vigorous constitution, and therefore better suited for pot culture, may be named *Avalanche* and *Miss Lucy Finnis* among sorts with white corollas, and *Alphonse Daudet* and *Avalanche* among dark kinds.

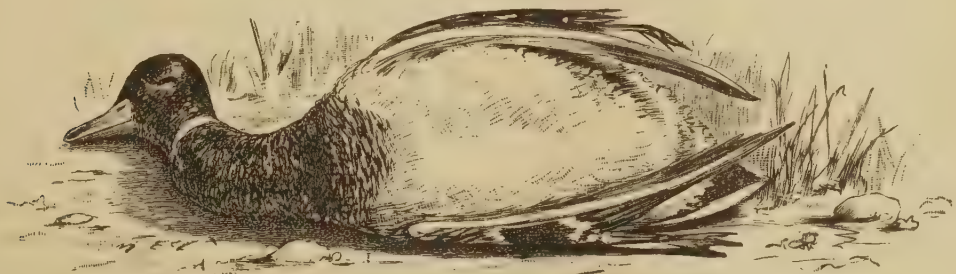
H. P., in *Gardening Illustrated*.

SKELETONIZED NEPENTHES.

At the exhibition of the Royal Horticultural Society, at Liverpool, in June last, among the charming collections of skeletonized leaves and flowers there shown, the *Nepenthes* were very conspicuous, several fine pitchers having been successfully subjected to this process. The pitchers show a very close net-work of fiber and retain their natural shapes. They are remarkably curious and very effective, and rank among the most desirable of all forms of vegetation for skeletonizing.

POLYANTHA ROSES.

English gardeners are raising the *Polyantha* Roses as low standards from one to three feet in height for the purpose of placing them with Ferns and dwarf Palms in the conservatory.



PLEASANT GOSSIP.

ATAMASCO LILY.

I feel I will be deemed egotistical in taking issue with such noted and trustworthy authority as the editor of this MAGAZINE, but am constrained by a desire strong and irresistible to correct what I believe and am taught is a mistake in regard to *Amaryllis Atamasco*, or, as botanists mention it, *Zephyranthes Atamasco*. I am pecuniarily interested in this bulb, as for four years I have constituted myself a collector in large quantities for the trade. When *Z. Treatiæ*, as "Fancy Lily of the South," was first introduced, some four or five years since, I claimed it was identical with *Z. Atamasco*, with only difference a smaller bulb and weaker flower; but such eminent botanists as Dr. ASA GRAY, SERENO WATSON and Prof. THOMAS MEEHAN enlightened me as regards its difference, the foliage of *Z. Treatiæ* being rush-like, whilst *Z. Atamasco* was flat, but in no case, outside of two, previous to the issue of July VICK'S MAGAZINE, have I heard any claim that *Z. Atamasco* was any thing but pure white faintly tinged with pale flesh on decay beginning, which should not be taken into account when describing or illustrating it. RAWSON, of Boston, in his catalogue, offers two varieties of *Z. Atamasco*, rose and white, and Mrs. FANNY E. BRIGGS, once a contributor to your MAGAZINE, says she has long been familiar with the rose-colored variety of *Z. Atamasco*.

Now, I claim to be not only pecuniarily interested in this, but a wide reader on the subject, and in all I have read, that the rose-colored was named *Z. rosea*. I have five varieties of *Zephyranthes*, viz.: 1st, *Z. Atamasco*; 2d, *Z. rosea*; 3d, *Z. candida*, and 4th, *Z. ocherea*, or yellow, *i. e.*, botanically, *Habranthus Andersoni*, and 5th, *Z. Treatiæ*, called "Fancy Lily." In the illustration of *Z. Atamasco*, in July issue, I find fault with it in three particulars, 1st, as to coloring, for, if I am correct, on first opening and for two days no tinge of pink is observable, but on the third day, when its prime is over, then a pale withered show of pink is made, which mars its beauty, but that is doubly done by its withered appearance. 2d fault, the foliage is incorrect, inasmuch as in *Z. Atamasco* the foliage is the same width from beginning to end, not widening, as in the illustration. 3d, The bulbs are never any part above ground, but are always full one to two inches under the surface. Now these *Z. Atamasco* which I have now on hand, seventy-five thousand bulbs, respond readily to almost any decent treatment. I gather them in March, just after the flower bud is fully developed in the bulb, but not in flower, and then by great pains, learned by the loss of thousands, I keep these bulbs dormant, do not allow them to develop further, so that when I fill an order and bulbs have been bedded out from two to three weeks the flowers appear in all their loveliness, whereas if left in the ground here until after flowering was over and bulbs cured, the purchaser would have to wait one whole year after to see them flower.

In the illustration alluded to *Z. Atamasco* is incorrect, as it has all six petals represented as same width, whereas three are wider than the others, as in *Lilium candidum*. Here, in Upper South Carolina, they bloom in late March and early May, and

fine effects are produced by bedding out amongst Hyacinths. Last fall I bedded five hundred mixed, all colors, single and double Hyacinths, almost touching, and close touching them a great number, about a thousand, I think, of *Z. Atamasco*. The bed when in flower was greatly admired and commented upon, and gave great satisfaction to its owner.

MRS. J. S. R. THOMPSON.

In regard to the above criticisms, we will say that the plate of *Atamasco Lily*, in our July number, was made from a painting of a flower raised in the greenhouse. It fairly represents the plant as it blooms with us, and our bulbs have been received from different Southern sources. *Zephyranthes rosea*, which has been mentioned, differs from it in having a uniform rose tint. We have had no reason to doubt the genuineness of these bulbs, since the appearance of the flower corresponds well with the botanical descriptions of our leading authorities. CHAPMAN, in the *Flora of the Southern States*, describes it as "white, tinged with purple;" GRAY, in the *School and Field Book*, says it is "regular, funnel-form, white and pinkish." WOOD'S *Class Book* says, "flower large, white and pink," and in the *Botanist and Florist*, by the same author, it is described as "pink-white." With such authority we cannot be far astray in thinking our plants to conform to the standard type, and the color is what appears when the flower first opens. The leaves in the plate, it is true, taper too gradually, as they really commence to taper to a point only about an inch from the end, though for the artist it may be said that from his position to them they may have had the appearance he has represented. As to the bulb above the ground, that is an immaterial point, since they will grow either way, under ground or above. The artist showed our method of potting the bulbs partly out of the soil.

Now, we do not pretend to decide that the plate represents the typical *Z. Atamasco*, nor whether the color, which may vary with different soils and locations, is to be considered an important botanical feature, though our own judgment decides not; but it is the *Atamasco Lily*, or one type of it, as it passes in the trade.

LILIUM EXCELSUM—CLIMBERS.

My curiosity is aroused in regard to the *Lilium excelsum*. I have not yet met one, and catalogues describe it as "delicate cream or buff," and all fix the price at one dollar; therefore, I suppose, it must be a very beautiful Lily. Is it a large or small flower, with spreading, recurved petals or trumpet-shaped? And, most important question of all, is it hardy and easy of cultivation, or is it uncertain in its habits, like *L. auratum*? I have attained some small degree of success with the latter, and might be induced to try *L. excelsum*, if it seemed to be promising.

What time in the fall is best for setting Lilies, Iris and Yucca?

I would say a word in favor of Adlumia, or Alleghany Vine. It seems to have established itself near my front door, and runs riot over the piazza, festooning it in all directions with its graceful feathery foliage and delicate blossoms. It winds around two pillars, meeting overhead and starting on for a higher climb. A seedling has covered the trellis of a climbing Rose, as if it were ashamed of the nakedness and shabbiness of the latter, and wished to cover it with its own beautiful garments. Many young plants come up every season, which I transplant to various desirable places, and give away more. Quite different from this is a wee little Clematis Jackmanni, set last spring, which has attained the astonishing height of fifteen inches, more or less. It has remained stationary a long time; I do not know whether it can be expected to live through the winter in such a feeble state. A Tecoma radicans, set last year, behaves a little better, but it has failed to hang out its clusters of scarlet trumpets, as I confidently expected it to do. Alas, for hopes deferred.

N.

Lilium excelsum has a flower from four to five inches in diameter, with recurved petals; it grows well the first year from strong bulbs when first planted, and blooms freely, but afterwards is quite unsatisfactory, as the bulb is very apt to go to pieces without forming a new one. It is very peculiar in this respect, and not at all reliable.

It is a good time, the present month and the next one, to set hardy bulbs.

Both the Tecoma and the Clematis mentioned will probably make a stronger growth next year.

ANTS IN THE GROUND.

I am very much troubled with black ants in the ground under my Rose bushes. Can you or your correspondents suggest a remedy that will destroy them without injury to the plants?

W. D. T., Philadelphia, Pa.

Ants in the garden are troublesome creatures to deal with. Where they can be attacked with hot water in their nests they can be destroyed in considerable quantities. We have seen kerosene oil used to drive them out of their runways, but it is ineffectual to rout them, though troubling them for a time. They can be

trapped, but it requires perseverance and time to accomplish it. Pieces of sponge can be sprinkled with sugar and laid in their way; they will enter in numbers into the sponges, which can be quickly picked up and dropped into hot water. Then repeat the operation until the whole company is destroyed. Another course to pursue is to sink vials or little cups of sweet oil to their rims in the soil near the ants' quarters; they will sip the oil, which they are fond of, but it kills them by suffocation, as it clogs their breathing organs.

GARDEN INQUIRIES.

Is there a perennial *Convolvulus*, and can you supply seeds? While passing through a neighboring town, I saw a small cottage which was entirely covered with a vine whose leaves and flowers resembled the annual *Convolvulus major*. The blossoms, of which there were almost countless numbers, were all white. I inquired the name of the plant and found that they did not know, "only it comes up every year."

Is autumn or spring the best time for transplanting Maple trees?

Can the large English Gooseberry be propagated from cuttings in the open ground, or do they require starting in pots? I have some particularly fine bushes which I wish to increase, and have been told that they cannot be propagated like Houghtons or ordinary sorts.

Are Blackberry canes that have borne fruit one year to be removed in the autumn, like those of the Raspberry? I have carefully read ROE's interesting book, *Success with Small Fruits*, but can find no definite directions upon this point. On coming into possession of our garden we found a hedge of fine Blackberries which had followed their own devices for three years. You can imagine the tangle. We had them thinned out and cut down to about four feet. Consequently, this year, there is promise of abundant fruit on the laterals. You will perceive from my queries that I have no gardener, only the "intelligent and trustworthy boy," such as SUSAN POWER speaks of in one of her delightful papers.

DOROTHY.

The plant here described and inquired about as a perennial *Convolvulus* is probably *Calystegia Sepium*, a hardy perennial native climber, producing its large white flowers with a pinkish tinge, in great profusion. Roots of this plant can be supplied.

Maple, and all other broad-leaved trees and shrubs, can be transplanted either in the fall or the spring. When transplanting is done in the fall, in cold climates, some special care is necessary to prevent the wind doing damage. A good plan is to draw up a good sized mound of soil about the tree, about two feet high, to prevent the wind loosening the roots, and

in case of large trees, a stout stake should be set by each one, and the tree fastened to it. The mound about the tree or shrub has an additional advantage of preventing mice from gnawing the bark.

The English Gooseberry can be raised from cuttings as are our American varieties, though they root less easily. One method of raising them is by stools. This is a kind of layering, though instead of bending the branches down, the soil is raised up in a mound about the plant and worked in among the shoots. A plant intended for a stool plant should be cut back in the spring within a few inches of the base, which will cause a new growth of numerous shoots. As soon as these have formed and the wood begins to harden, the soil can be drawn up well around the plant, so that the bases of the young shoots are covered several inches deep; at the end of the season it will be found that roots have formed, and the rooted shoots can then be cut away and be heeled in for the winter, to be planted out in the spring. Enough soil should be drawn around the old plant to protect it until spring, and then be removed to allow another growth of shoots.

Blackberry canes that have borne should be cut away, the same as the Raspberry.

RASPBERRIES AND DRY LAND.

Finding myself again puzzled with various difficulties, I send a few questions to you, which I suppose may be answered through your MAGAZINE, which I find a great treasure.

I find some of my Raspberries dry up and never mature. Is that Orange rust? Is there anything I can do to prevent it?

My sand ridge burns up sadly in summer, though I have littered it heavily. Will coal cinders and ashes spaded in help it to keep moisture?

Will a bed of coal ashes and cinders under my beds of flowers helps to keep out moles? I find them very destructive.

M. A. W., *Grand Crossing, Ill.*

Raspberries that dry up do so for want of moisture, and this has been no uncommon occurrence the present season. Orange rust will be recognized by any one as soon as it makes its appearance on the leaves of Raspberry or Blackberry plants, and the probability is that your plants are not affected with it.

Raspberries should be planted in a cool, deep soil to be most satisfactory; a warm sandy soil is not well suited to them.

Coal cinders and ashes will have the effect to retain the moisture longer in a

light sandy soil, and if there is plenty of rubble and slate they might partially prevent the working of moles.

BLACK APHIS—BAGGING GRAPES.

In your valued MAGAZINE I have seen no notice of vermin, green and black lice, which infest nearly everything in the garden, and even destroy the leaves of many trees and shrubs. They are new to me. A black fly or ant destroys new shoots on Pear and other trees and on many plants. I have used Tobacco juice, Paris Green in water, kerosene and sour milk, Hellebore, and yet they all seem to grow fat. Of course, they have mostly graduated ere this and gone abroad.

Regarding Grapes which are looking finely, and about the only thing that insects have not troubled, is there any object in placing the bunches in paper bags tied closely at the mouth, and allowing them to ripen in that way? I understand this has been done with success.

J. H. R., *Hartford, Conn.*

The kerosene emulsion often mentioned and described in the MAGAZINE, will destroy the black aphid here inquired about. The emulsion of kerosene and sour milk mentioned above should be effectual, as we have no doubt it is if properly applied by means of a syringe, or other instrument that would throw the mixture on both sides of the foliage.

Bagging Grapes would be no advantage where the fruit is healthy and apt to continue so. The bagging is done to preserve the fruit from mildew and rot in those localities where experience has shown that it is almost certain to appear. The bags should be put on soon after the fruit is set, and in most cases they serve the intended purpose.

DAISIES.

Will you inform me what method of treatment can be adopted to prevent Marguerites from deteriorating? This is the second year for my bush, and the flowers resemble Dog Fennel very much.

MRS. C. A. L. R., *Hamilton, O.*

Double Daisies should be lifted, separated and replanted every year to prevent degenerating. The present month is a good time for this operation.

SHRUBS AND EVERGREENS.

Please tell me the proper time to transplant large Lilac bushes and evergreens.

V. L., *Warrenton, Va.*

Lilac bushes and flowering shrubs generally can be transplanted in October or November. The best time to transplant evergreens is in the spring, a little before their growth commences.



PRUNUS TRILOBA—FROM A PHOTOGRAPH.

PRUNUS TRILOBA.

This beautiful shrub cannot be planted too freely. It is quite hardy, a vigorous grower, and blooms abundantly. It is one of the earliest shrubs to flower and brings Spring to us in her freshest garments. The flowers closely resemble those of the Flowering Almond. With a Spruce, an Arbor Vitæ, or some other evergreen for a background, it appears to the best advantage, but it is a good shrub in almost any position, and either grouped with others or standing alone. It is an erect, handsome grower.

COLEUS IN WINTER.

I have been quite successful with Coleus as house plants, and perhaps my method may be of some use to others who might like to keep them over.

During the months of August and September take cuttings of Coleus and put them in small pots, three inch, sunk in the ground, filled with rich, light soil; they root very easily and quickly. I always cut half way between joints and place the joint well in the soil. Then,

when the weather grows cold, remove the pots in doors, Coleus is very sensitive to the cold, and give them plenty of light, and keep them there until you wish to bring in a window-box. In the window-box first put in about three inches of fresh horse manure well pounded down, and then fill the box with rich light soil. I prepare it one-third sand, one-third garden soil, and one-third well rotted manure, thoroughly mixed. Place the rooted cuttings in the soil about five inches apart and give them plenty of light and sunshine and a warm room; they do well when the thermometer is at 75° or 80°. Water them with tepid water and keep the box moderately wet.

They grow quite rapidly toward spring, and need to be kept well pinched back, as they are awkward growing plants. During April and May they grow luxuriantly. The colors are brilliant, and they make a fine display. Do not transplant them to the garden until June 1st, then cut them back and plant them in rather a shady place. Mine are now, July 1st, very handsome.

E. W. L.

WATERING IN HOT WEATHER.

Many people suppose that attention twice a day (morning and evening) is sufficient for pot-plants; but in hot, parching weather this is by no means enough. I have known places where there were stated times for watering, and, no matter what the weather was like, none was done at any other period of the day; but the highest excellence in the culture of plants in pots can never be attained when a hard and fast rule is laid down and adhered to in this matter. It is not only that, when watering is done at regular stated intervals, plants do not get water when they need it, but they frequently get it when they do not require it, and, if a plant is watered only an hour or two before it becomes sufficiently dry to absolutely need this attention, it will never make roots so freely as when watered at the right moment. Nothing so much excites the ire of a good plant grower of my acquaintance as watering plants before they need water. "Don't give a plant water now because it will want some in an hour's time," is the remark often made to the young men with him; and in summer he has every plant looked over three times a day, and in winter twice. Many root-bound plants should never get dry in summer, especially when making their growth or coming into bloom; for although becoming dry may not do much injury, it often takes away from the vigor which is necessary to the attainment of great excellence. In market gardens I have known pot plants to be gone over every hour in the day, and the results well justified the labor bestowed. It is not, of course, necessary that a soaking be given each time, for if the whole of the soil in pot is wet, a little given from time to time will keep it so, whilst preserving the roots in that equable state of moisture which they love to enjoy in the growing time. In the winter I consider that good is done by allowing plants to become nearly or quite dry from time to time, as the soil is thereby maintained in a sweet condition, and the roots in a healthy state; but in hot summer weather, every time the soil becomes quite dry, there is a check which, if often repeated, has a diminishing effect upon size and beauty. In the case of plants which are exposed to the fierce sun the harm done in this way is

often serious, though generally unsuspected by the grower, who may think that in looking to his pot plants twice a day he is doing his duty by them.

R., in *Gardening Illustrated*.

GRAPES IN NEW HAMPSHIRE.

Of my Grapes that are hardy on the trellis through our cold winter, with only leaves and evergreen boughs around their roots, starting in spring even to terminal buds, are as follows: Concord, Brighton, Delaware, Dracut Amber, Hartford, Isabella, Lady, Lindley, Martha, Massasoit, Moore's Early, Northern Muscadine, Salem, Telegraph, Wilder, Worden and Lida. While those that yield but little to the cold are: Amber Queen and Feemster's Favorite, young vines, Ann Arbor, Faith, Pocklington, Vergennes and Wyoming Red. Others that have about one foot of live cane are: Dutchess and Jefferson. Agawam was perfectly hardy until it suffered by drouth the last four years more than any of my forty varieties, and since it has winter-killed pretty well down; it has the largest canes and leaves of any of my Grapes, and is very fine with a peculiar aroma of its own. Goethe, Eumelan and Rebecca winter-killed, while Croton has killed to the ground for four winters, and has never given me fruit on a six-year-old vine; it has proved the most tender in growth and wintering of any in the list. A vine purchased for Prentiss proved untrue, being a black Grape, much in shape like the old Isabella, but earlier, killed well down but fruited at two years old, as did Massasoit, giving each a few clusters. Lady Mallard, new, my vine set this spring, is said to be hardy near me.

I am also trying a native seedling, Lady Henniver, a red Grape, called hardy, and a good early Grape where it is known. Black Cluster and Catawba will not winter enough cane to give fruit. I fear Jefferson is not hardy or early enough to give me fruit. Dutchess promises better, more of the vine living.

I have tried raising seedlings, wishing to get early, good Grapes, as all later than Concord are not sure, and I may here get some as nice and early as Lady. I have some seedlings of the Delaware in bloom at three years old, but fear they will set no fruit. Of forty-two seedlings

of Martha, Agawam and Delaware, one and two years old, thirty-two wintered very lightly protected, as snow came before the boughs were put on. They have shown quick growth and many forms of leaf and shades of color. I will keep you informed of the good ones, if any give fair fruit in time.

All through the Merrimack River valley wild Grapes are found, mostly very acid and dark colored, of different forms, a few are quite good. So Grapes do well all through the central part of this State. My vineyard is nicely situated for sunlight and drainage, and late spring or early fall frosts do not reach my home on the hill. Many varieties of fruits do well with me that will not live a few miles away. The little Delaware Grape is perfection here, while many in this State cannot grow it at all. I have only one vine of most kinds, wishing only a home supply, but of Lady, the earliest Grape I have that is nice, Martha, Brighton, Delaware and Concord, I have two or more vines. I have vines that gave two bushels each at five years old. I keep my vines trained to a trellis twelve feet in length, running north and south. The leaves are very handsome on the Amber Queen, it is growing rapidly and has healthy, large leaves of vivid green, with yellow shadings that look like gold sheen on them even in a rainy day, and such tender tints on the new growth.

Sunny Side Farm.

THE FLORIST'S TULIP.

The following contribution published in an English journal several years since, is of sufficient interest to appear at this time :

The Tulip is perhaps one of the most precious of flowers in the estimation of the florist, because of the extraordinary transformations through which it passes, as well as on account of its possession of other qualities of a not less fascinating character. One singular peculiarity of the Tulip is the extraordinary change which takes place when the seedling breeder "breaks," or, in other words, assumes its proper and permanent character. That a flower which, on its first blooming, from the seed, and probably for a series of years afterwards, should (to take the case of a fine Bybloemen) present but one dull slate color with a

circle of white at the base; that this flower, so unattractive in its appearance, should all at once, without any apparent cause, completely alter its nature; that the dull slate color should disappear entirely, giving place to a delicate feathering of rich purple or violet, while the pure white, which was confined to a narrow circle at the base, should spread all over and become the ground color of the petal; and that the latter and true character should be maintained during the whole of the after existence of the plant, is surely so remarkable a fact in vegetable physiology as to deserve at the hands of the scientific and practical botanist the closest investigation.

Many persons, though well acquainted with flowers, are unaware of the changes through which the seedling Tulip passes. It is four or five years before it flowers, then it takes on the self-colored or breeder form; but in the breeder state it is easy to class it with the Bizarres, Roses, or Bybloemens, according as it may belong to either of these three divisions. Then, at the expiration of sometimes one or two years up to six and seven years, it breaks into its true character, and becomes what is termed "rectified." Why the Tulip should be an exception to the universal law observed in seedling flowers, and have an almost exceptionally intermediate state, passeth knowledge. The practical florist asks of the botanist the why and wherefore of this, and no reply is forthcoming.

It is said that in the whole range and history of plants there is no analogy to this phenomenon. Other flowers will occasionally sport, and blooms will vary in character from the effect of seasons or culture, but these are accidental variations, and although a "sport" may sometimes become permanent, such an incident is to be regarded as an exception to the general rule. The Tulip alone has naturally, and according to the law of its being, two distinct stages of existence: first the breeder state, in which the petals are, excepting the circle of white or yellow at the base, of one dull color throughout; and, secondly, its broken or perfect state, when it becomes smaller, shorter, and less robust in its growth, and the color, instead of being dull and diffused all over like a field Poppy, is concentrated on the edge or center of the petal into brilliant

stripes and feathering, so sharply and finely cut that the engraver's skill can scarcely do justice to it. No one, however careless an observer of the workings of nature, can fail to be struck with this wonderful metamorphosis on first being shown a bed of breeders side by side with a bed of broken flowers; and yet, wonderful as it is, it seems to have failed in attracting the notice and inquiry of the many distinguished men who have devoted themselves to the study of plants.

Readers will now be able to understand a little better, perhaps, than before what constitutes a "breeder" Tulip. In all Tulip exhibitions they form a part, for in the breeder state some of them are very beautiful indeed when thoroughly pure, finely colored, and of good form. But when these beautiful breeders will break into the rectified form—when the floral chrysalis shall develop into the brilliantly-marked butterfly—is not given to men to know. It may be next year; it may not be till the grower has added three or five to the number of those he has devoted to his favorite pursuit.

FLORAL GOSSIP.

Last year I told you about some rockeries in which the stones were laid up in mortar, with all the precision characteristic of the stonemason, and also that the owner of them had white-washed them. This year there has been an improvement. She has painted them, and, you may not believe this, but it is a fact, susceptible of proof any day, if you will come and see me and let me show you the wonderful things; she has painted them white and yellow, first a white stone, then a yellow one, and the variegated effect is to make one miserable for days after, for he cannot get rid of the glare of these monstrosities as they display themselves in the hot sunshine. And to cap the climax, she has painted some of the leaves of an Ivy that stands on the veranda a bright red. This is sober truth, for I went up to the gate to see if I was not laboring under the effect of nightmare, or was the victim of an optical delusion, and there were the leaves smeared over with the reddest of red paint. I suppose she has done this because she is fond of a contrast of colors, and the red and green in combination afford her pleasure. This supposition is

strengthened by the fact that she has painted all her flower pots green with red rims. The effect is really painful, and yet I could not help feeling a sort of sympathy with her, for I feel sure that she has some longing for the beautiful, and though her way of trying to gratify the longing is painful to me, it must afford her some gratification, and if it does that, I suppose I ought not to complain. After all, what she has done is really no more a violation of what you and I consider good taste than it is to stick up three sticks in the yard and hang a red kettle on them. It's all a matter of taste, and tastes differ. But I wish you could see them.

This has been a very dry summer here, and but few flowers have done well. The *Portulaca* has come out strong, like Mark Tapley, and proved to us what a valuable flower it is for dry locations. It has not seemed to mind the lack of moisture in the least, and is now, as it has been for the last six weeks, completely covered with its brilliant blossoms. I have never had a finer bed of it than the one glowing under my window as I write this. There is red and scarlet and crimson and pink, pale yellow and the richest of old gold, white, and a sort of purple in a little bed, and the effect when the sun is shining full upon it is extremely brilliant. It is oriental in the gorgeousness of its colors. Make a memorandum of this: The best plant for sandy places, where the soil will get very dry, is the *Portulaca*.

Oh, the Asters! I am in ecstasies when I think of what they will do by-and-by. They will repeat their last year triumphs, I expect, and prove what I have long claimed for them, that they are the finest of all fall flowers. Such a display as they made last season. We had them in all shades of blue and purple, in crimson and in delicate rose, in white, and some were exquisitely variegated. We would look at one and say that was the prettiest of the lot, and go on to the next and make up our minds that that was the finest, and so on all through the bed, and when we had been the rounds we would conclude that they were all the prettiest. Much as I admire the *Chrysanthemum*, I cannot say that I think it any finer than the Aster is. I had some of the pure white kinds in vases when a friend was

visiting me, and she mistook them for Chrysanthemums, so close is the resemblance between the two flowers in shape, color and habit. Of course, the resemblance is confined to the flower, but the Chrysanthemum has nothing to boast of in the matter of foliage, so that they are about on a par in this respect. If we only had a good yellow Aster we could make a better display of these flowers than any one can of the Chrysanthemum, for—this may be treason, but I'm going to say what I think—the Aster is the finer flower of the two. There.

Our poor Pansies. I sent for some of the finest seeds I could hear of in the spring, paying two dollars for a single package. From this investment I expected great things, and though I have been disappointed, on account of dry weather, I have not regretted that I expended my money in the way I did. The plants grew well at first, but the drought set in, and they soon began to suffer from it. We watered them nearly every night, but artificial application of moisture didn't seem to do the good that rain does. They have bloomed, but the flowers have all been small. But such wonderful colors and combinations of colors. Some of them have been miracles of color. We have them in pure white, clear blue, clear yellow, black and lavender, and then the purples and maroons, the mahoganys and the coppers, the bronzes and the bizzares, there seems to be no end to the variety, and no two just alike. If the weather had only been more like that of our ordinary summers what wonderful flowers we would have had. We hope that the coming of cool days will give new life to the Pansies, but we are afraid that the cool weather will come too late, for in many gardens they are dying in spite of regular waterings. They do not seem able to withstand the terrible heat of this extraordinarily hot summer. It enervates them, and robs them of their usual vitality. Roses that I set out in May have had but a few blossoms on them. The dry spell began about the time they were put out, and they have only been able to live, for them to thrive has been out of the question. The only good flowers I have seen this year are in gardens where there are facilities for the use of water daily in large quantities. *

STRAWBERRY EXPERIENCE.

You sent me in the spring of 1885, one hundred each of Wilson and James Vick Strawberry plants. I set them in rows one foot apart in the rows, and a foot and a half between the rows, leaving a space three feet every three rows for pathway. The first season they were well cultivated, buds picked off and the runners nipped off as soon as they appeared. In the fall I put leaves between the rows and around the plants and covered lightly with straw. This spring I removed the straw, but left the leaves till they got through bearing, and then spaded them under. We picked the first quart from the Wilsons the 8th of June, and the last the 7th of July; from the James Vick the first quart was picked the 15th of June and the last quart the 10th of July. The Wilsons gave us fifty-three quarts, and the James Vick ninety-one quarts, in all four and one-half bushels from the two hundred plants. We are not experts in the business or perhaps might have done better.

Wanting the opinion of others as to the quality of the James Vick berry, we presented some to two clergymen, and as their opinions were directly opposite we came to the conclusion the Vick was a very good berry, at all events, they disappeared from our table quite readily.

J. R. H., *Ellenville, N. Y.*

VIOLETS AND RED SPIDER.

Inexperienced cultivators of Violets are sometimes perplexed to know why their Violets do not grow in a satisfactory manner through the summer. They give the plants a suitable soil and a fair amount of root moisture. Still the leaves wear a yellowish hue instead of a dark green one, and they cannot tell why this should be so. Just such a case came under my notice lately, yet to all appearance the conditions under which they were growing were all that could be desired. The soil had been well prepared, and the position a shady one. On examining the leaves I found them to be seriously attacked with red spider. The proper way to treat Violets that are to flower in frames during the autumn and winter is not to wait until the spider attacks them, but to begin syringing them with clear water every evening as soon as dry weather sets in. We do this every

year, beginning about the middle of June, and we do not have any spider on our Violets. With the garden engine it does not take long to syringe two or three hundred plants.

Q. M., in *Gardeners' Magazine*.

TRAINING AND PRUNING VINES.

In the July number you say you would be pleased to hear from your readers about Grape growing and their modes of



FIG. 1.

pruning and training, so I thought I would tell you mine.

For several years I tried what is called the fan-shaped system, which was to allow five shoots of bearing wood to



FIG. 2.

each vine, as in Figure 1. After the shoots have reached the height desired the end is pinched off, and each one of the buds along the shoot will send out fruit-bearing wood the next year. In trimming, always leave one bud of new wood at each joint.

I now train them on a system I like much better, and which is illustrated by Figures 2 and 3. The first, third, and every other vine I let run to the top rail, and then branch them off by letting one of the joint buds grow near the top, and the terminal bud grow in the opposite direction, thus forming the two arms, as seen in Figure 2. Each of these arms meets the second

vine beyond, just half way, or over the lower vines, when their ends are nipped off. They will then throw out side shoots, which should be nipped off after the first leaf, and so on with all the buds, always leaving at least one leaf. The next year all the buds on the two arms of each vine will bear from two to four bunches of Grapes, and after the last bunch is in flower pinch off the shoot, leaving one or two leaves beyond the last bunch of Grapes. After the ends have been pinched off, the new wood will begin to throw out side branches which should be checked, leaving one leaf on each, and thus checking the new shoots till the end of the season. This checking of the wood sends the substance of the Grape vine into the fruit, and as a result there are large clusters of fine Grapes, although not so many bunches as when more wood is left. In the next winter the vine will look somewhat as shown at Figure 3, and should be trimmed leaving one bud of new wood at each joint, as seen at Figure 3. Never allow but one bud to grow at a joint. A. J. C.

DWARF CORNEL.

The Dwarf Cornel seems to be a good plant for covering the ground in



FIG. 3.

must be quite gorgeous when its scarlet fruit is ripe.

J. V., *St. Stephen, N. B.*

BULB PRIZES.

The General Union of Holland offers, through the Massachusetts Horticultural Society, a special list of prizes for spring flowering bulbs. Besides the above, the Society offers forty-one cash prizes, ranging from twenty dollars to two dollars, for blooming bulbs. The General Union prizes are as follows :

Hyacinths—Fifty named bulbs in fifty pots, in bloom, not more than two of one sort: first prize, gold medal; second prize, silver gilt medal; third prize, silver medal.

Tulips—Twenty-five pots, Single Early varieties, in twenty-five distinct sorts, three bulbs of the same sort in a pot, in bloom: first prize, silver gilt medal; second prize, silver medal; third prize, bronze medal.

Polyanthus Narcissus—Twenty pots, three bulbs of the same sort in a pot, not more than two pots of one sort: first prize, silver gilt medal; second prize, silver medal; third prize, bronze medal.

The Society's prizes are as follows :

Hyacinths—Twelve distinct named varieties in pots, one in each pot, in bloom, three prizes, \$10, \$8, \$6.

Six distinct named varieties in pots, one in each pot, in bloom, three prizes, \$6, \$5, \$4.

Three distinct named varieties in pots, one in each pot, in bloom, three prizes, \$4, \$3, \$2.

Single named bulb, in pot, in bloom, two prizes, \$2, \$1.

Three pans, ten bulbs of one variety in each pan, three prizes, \$10, \$8, \$6.

Tulips—Six six-inch pots, five bulbs in each, in bloom, three prizes, \$5, \$4, \$3.

Three six-inch pots, five bulbs in each, in bloom, three prizes, \$4, \$3, \$2.

Three pans, ten bulbs of one variety in each pan, three prizes, \$5, \$4, \$3.

Polyanthus Narcissus—Four seven-inch pots, three bulbs in each pot, in bloom, three prizes, \$6, \$4, \$3.

Hardy Narcissus and Daffodils—Best display, three prizes, \$8, \$6, \$4.

Jonquils—Four six-inch pots, six bulbs in each, in bloom, two prizes, \$3, \$2.

General Display of Spring Bulbs—All classes, three prizes, \$20, \$15, \$10.

Lilium Longiflorum—Best three pots, not exceeding ten-inch, two prizes, \$6, \$4.

Lily of the Valley—Six-inch pots, in bloom, three prizes, \$5, \$4, \$3.

Anemones—Three pots or pans, two prizes, \$4, \$3.

Competition for these prizes is open to all persons residing in the United States. The date of the exhibition, which is to be held in Boston, is not yet exactly fixed, but it will be about the 23d of March, and will be made known early in January.

ALTERNANTHERA.

The *American Florist* says the florists of Chicago propagate *Alternanthera paronychioides* by taking cuttings from the bedded plants about the first of August

and striking them in a cold-frame in which a few inches of sand has been placed. The frames are covered with sash and carefully shaded for several days after putting in the cuttings, then given air and a little more light until rooted. They are then potted and carried over in the greenhouse during the winter. The cuttings are difficult to strike unless soft young wood is used. Old clumps of the plant kept over winter in the greenhouse can be forced into growth in early spring, and will supply a stock of soft cuttings.

BEGONIAS.

In the June number "An Old Subscriber," chronicles the demise of a Rex and Metallica Begonia, the cause for which she cannot account, and asks what treatment they require. I am ignorant as to the care best suited to their needs, but have learned through others' experience that they are very impatient of water upon their foliage. Last year, my daughter had a B. metallica that was in good soil and growing finely. During the summer it was frequently showered, the leaves began to crisp up and the plant died in spite of what was thought to be good care. Not knowing what else to attribute its death to it was charged to cut worms, but she learned afterward that water upon their leaves would cause them to die, also that the leaves of B. Rex were sensitive to water, a fact she accidentally verified this summer by spilling a little water on the leaf of a Rex. The portion of the leaf getting wet withered and died. The plant was in poor condition when received from the greenhouse, and though she tried to coax it into growth, all efforts failed until the "hot water cure" was resorted to, which she administered by pouring a little on the soil and the rest into the saucer, when it quickly put out a leaf which grew rapidly, and was soon followed by others. It shows its partiality for hot drinks by checking its growth when the warm water is withheld. Begonias are said to do best in the shade, with a little sun in the morning.

Perhaps the air in the room of "An Old Subscriber" was too dry for Geraniums. Plants need moist air.

FLOWER LOVER.



The Bees are ever busy, "We work for one another,
 They work the whole day long, Nor leave our task undone,
 Humming often to themselves But toil from early morning
 This soft, low, happy song. Until the evening sun."

"We gather from the flowers Sweet honey as we fly,
 And store away this treasure With kindly words and actions,
 For winter by and bye." While passing on our way.

M. Elizabeth Whittlemore.



OUR YOUNG PEOPLE.

VACATION DAYS.

IN TWO CHAPTERS.—CHAPTER I.

"— I have my daughter's entire confidence," wrote Mrs. Warren to her brother, Mr. Fay, and can trust her fully for a visit at your home or elsewhere during the coming vacation. Her chief fault is an excessive love of what she calls fun; and hence, under certain provocation, her cousins may as well be on their guard against being harmlessly victimized."

A few hours later, on the grass in the old orchard, sat Mabel Fay, plucking at the Timothy tops and Clover heads while indulging in speculative remarks to her brother about their cousin, Pearl Warren,* whom they had not seen since they were children together.

"Auntie Warren's letter," she went on to say, as she reached for a "grand-daddy," and held him by four of his eight long legs to look at his eyes, "has piqued my curiosity, and I am impatient for Estelle Gordon's return, that I may sound her a little in advance. Being at the same college, she must know something of her."

"Much good it would do you!" ironically retorted Rodney, "if girls were on their honor regarding each other, as we boys are."

"Girls are just as honorable as boys; but in this case the inference is that no ill can be said of this paragon."

"Except," added Rodney, "that she is too fond of fun."

"Yes; but that is a pardonable fault," answered Mabel, as she tossed away Long-legs, unharmed, to resume his travels.

"What do you think?" exclaimed Mabel to her brother, a week later, after having found that young man with a book in his favorite seat in a gnarled Apple tree, "What do you think? Es-

telle says that cousin Pearl is a spiced favorite with teachers and students, and is admired and praised by all who speak of her."

"Of course, she could say no harm of her, to *us*, anyway," retorted Rodney, returning to his book.

"Nor to any one else, if there were none to say. But you needn't try to read, for I am going to sit down here and tell you what I've learned of her. It appears that she differs from some girls in declining to make acquaintances of the students in accidental or pre-arranged encounters without an introduction by a mutual friend. It seems that from her observations of that sort of thing among a certain class, she had resolved to decline all introductions to gentlemen, except during the 'regulation' hours for social intercourse, because those furnish all the leisure, she says, that good students can afford. Besides, I know for myself, that girls of the latter class can not keep up a speaking and bowing acquaintance with a lot of fellows who are sensitive and conceited, and too young to —."

"Hold on!" you are describing the majority of girls, exactly."

"No, I am not! You know, yourself, that such fellows feel a great deal more mannish than they do ten years later. Estelle says that when those boys are once introduced they are forever on the alert, and that when girls are hurrying to class with minds on their lessons or eyes on their open books, perhaps, if they chance to miss noticing a raised hat, it is deemed an intended slight, demanding after-explanation. You know how it is with such boys, Rodney, just let a pleasing girl give them the slightest encouragement—."

"I don't, either! it's exactly the other way, and I warrant that Pearl Warren has a 'favorite' *somewhere*, or she wouldn't be so independent. Nineteen-twentieths of the school girls have some one

* Some young reader may like to know that this is the same Pearl Warren that was written of in Volume VI of this MAGAZINE, page 385, and in Volume VII, page 28.

of whom they are thinking more than of their studies."

"For shame! Rodney. I was going to tell you a lot more that is such fun, and now you've put me all out of humor."

"O, well, never mind, Sis; go on, go on;" and he left his perch and sat down beside her.

"Well, Estelle says that some of the boys having no mutual friend to introduce them to Pearl at the 'socials' and 'class-unions,' formed themselves into a clique to see who should first entrap her into speaking without an introduction, and the room-mate of Estelle's brother was one of them. Now, you know, Rodney, that *some* girls think a plausible excuse for speaking will justify continued acquaintance, and so —."

"Of course, I do. There are plenty of 'em who invent excuses on purpose to open acquaintance."

"How you do interrupt. It's just the same with boys, only worse. I was going to add, though, that such improprieties no doubt spoil some really, otherwise, nice boys."

"'Not much,' they don't. The boys know, every time, just what they're about. But where's that 'lot of fun' coming in?"

"You are so exasperating, you get me off the track. Let's see,—O, yes; those boys tried to entrap Pearl into speaking. So it seems that, one day, while returning from class, a student behind her rushed to her side with open class-book, saying:

"'Ah, excuse me, Miss Warren; how far does our next lesson extend? I did not quite catch it.' He reported to his chums that she gave him a quizzical smile as though she understood his aim, and then pointing with her pencil to the end of the lesson, turned off that moment on to a street-crossing, and left him to plod on alone, although their rooms were in adjoining buildings.

"Shortly after this failure, Estelle's brother reported to her that one Kendall by name announced that he had a scheme that was sure to win. His boarding place was reached by the same gateway that Pearl passed through to go to her mother's apartments. So he invited a friend to dine with him, and the two blockaded the gate by leaning against it while talking, with their backs toward Pearl as she approached from class.

They appeared to be in such warm argument that, of course, they would have to be spoken to before they could be aware that any one wished to pass within. Then it would be easy, they thought, to flourish open the gate and with bows and excuses to pass on with her, chatting, until the broad walk divided. It seems that Pearl suspected this was a ruse and decided that she would not be *forced* to speak, otherwise she could have merely said, 'If you please,' for them to step aside, and then have passed in.

"But as it was, Kendall reported that she walked quite past them at her usual gait, until she came to the boundary of the wide lawn, where she entered by the carriage drive, and stepping aside, deliberately gathered some Buttercups, arranging them as she leisurely walked on to a side entrance, without seeming to have noticed them."

"Well, that is rich," said Rodney. "That sort of thing must be where her love of fun comes in. Any thing more?"

"Yes, something still richer. It seems that Kendall was so chagrined at his failure, and the shouts of laughter that greeted his report, that he vowed to have revenge on Pearl, and that, too, if possible, right before the class. What he thought a fitting opportunity offered one day, when Pearl was drawing geometrical diagrams, and Kendall was called up also. He strode from his seat looking very severe, and upon reaching the long blackboard, grasped the chalk and furiously drew a heavy line from top to bottom down its center, and then, jerking himself off as far as possible from Pearl, he commenced cracking away with his chalk at arm's length."

"What a sap-head to tell on himself like that," interposed Rodney. "What did Pearl do?"

"All the class reported that Pearl gave one surprised look as she realized the flurry going on at her elbow, and then, comprehending the situation, her amusement got the better of her and she laughed outright. Instantly turning to ask pardon of Professor and class, she found them all laughing, too; while Kendall was forced to see that, instead of confusing and embarrassing Pearl, he had only amused her, and committed himself transparently before them all.

"Another student, called Gregg, next

thought to try his luck. He finally reported to the club that he had stormed Miss Warren's castle outright at a time when he knew she was in. He had conjured up some business errand with her mother, and quietly ascending their piazza steps, he saw Pearl through the open door, standing on the opposite side of the room before a mirror, with an enormous white cat sitting upright on her shoulder, and heard her saying, 'O, yes, my pretty, pretty, snow-white tiger *shall* see his own self in the glass, so he shall.' As he quickly stepped to the entrance she saw him in the mirror, and turning suddenly around, broke into a merry, abrupt little laugh as though at the absurd exhibition she had been making of herself, while he instantly felt like

an idiot for having thus surprised her by his light-footed approach, and became so confused that he could hardly find his tongue to ask for her mother. She merely bowed in response, and marched from the room, with her pet cat still on her shoulder, and that was all he saw of her.

"But he continued: 'I'll tell you, boys, what I've decided; we all know there's nothing stiff or prudish about that girl in the class-room or elsewhere, and that she seems ready enough to see fun where there is any, and I believe she's just one grand girl, with too much sense to hold herself *so cheap* as to be caught by our little tricks——.' But do listen! that tea bell wont stop till we go in. I'll tell the rest by and by."

MARIA BARRETT BUTLER.

THE DIFFERENCE.

May had come and spring had come, too; the flowers said so, although the wind still blew cold, blossoms opened everywhere, in woods and meadows, on shrubs and trees, and even on the thorny hedges. But a little Apple tree which grew in a hedge had the daintiest flowers of all; and one little twig of this tree was more beautiful than any of the others, because it was so closely covered with the half-open pink buds. The little twig knew very well how beautiful it was, and it was not at all surprised when a grand carriage stopped before the hedge, and a servant sprang out to break off the twig for a lady in the carriage. She held it in her hand, guarding it carefully from the warm rays of the sun until she reached home, when she carried it into a great room where the loveliest flowers bloomed in glittering vases. And among these, in a tiny vase, so white that it seemed carved from newly fallen snow, the fair lady left the little branch of Apple blossoms. Many people came through the room and looked at the flowers. Some praised them too much, others too little, others said nothing at all. And the proud little Apple blossoms, looking on and listening to all that went on around them, said, "There is a difference among people as among flowers. Some are for show, some are for use, some could be dispensed with altogether." Then they looked out from the window by which they stood, over a wide meadow where the grass was starred

with Dandelions, their yellow discs showing everywhere. "Poor, despised flowers," the Apple blossom went on, "You are not to blame for being what you are, so common and ugly that no one would ever think of gathering you for a bouquet. To be desired, one must be beautiful—there is the difference." "The difference?" said a Sunbeam, as it flashed in at the open window and kissed the sweet Apple blossoms. "You do not see clearly. Look again at the flowers you pity." And the Apple blossoms saw that the sunbeams shone on the common, ugly Dandelions outside as brightly as on themselves, and while they watched, a crowd of children, the youngest so small that the others carried it in their arms, came into the field. When the baby was set down in the grass among the Dandelions, he crowed and laughed in glee, while he filled both tiny hands with the golden blossoms. Some of the older ones wove Dandelion crowns for their heads, and chains for their necks, then danced, hand in hand, around the baby, happy as he. Others plucked carefully the long stalks with their feathery crown of ripe seeds, and tried to blow away all the seeds with one quick breath, for their grandmother had told them that the child who could do this would surely have a new dress before Dandelions bloomed again. "Don't you see," said the Sunbeam, "they are beautiful—they are sought after." "Yes, for children,"

said the little twig, scornfully. But as it spoke the lady came back with some friends, and in her hand she held a head of Dandelion seeds, guarding it carefully lest the wind should blow away one of the tiny winged arrows, and so mar the beauty of the whole. This she set into the white vase with the Apple blossoms, saying, as she did so, "See how different they are, and yet each is beautiful in its own way. I will paint them together, so

both shall keep forever the beauty the dear God gave them." And the sunbeams touched with silver the feathery crown of seeds, and flushed with deeper rose the pale petals of the Apple blossoms, as even now they fall upon the canvass, which keeps in enduring beauty the snowy vase, the Apple blossoms, and the Dandelion's crown of seeds.

From the German of ANDERSEN, translated by MARGARET HUSTED.

EDITOR'S MISCELLANY.

NURSEYRMEN'S ASSOCIATION.

The eleventh annual convention of the American Association of Nurserymen, Florists and Seedsmen, was held at Washington, D. C., commencing June 16th. The Hon. Norman J. Coleman, Commissioner of Agriculture, was the President of the Society, and delivered the opening address.

Reports from the different States were made in relation to the affairs of the nursery trade, from which it appears that the usual amount of stock is in process of cultivation. Among the exhibits deserving special notice were two tree-diggers, one by A. R. Whitney, Franklin Grove, Illinois, and one by L. G. Bragg & Co. Cotes & Poole, of Napa, California, showed a box of Cherries picked ten days previously and sent by mail, which were found firm and well preserved, with their proper delicious flavor. J. B. Wild and Brother, of Sarcxie, Missouri, exhibited trees and plants that were tied up last November, and which, without moss, sand or soil had been kept in cool storage until the 10th of June, and were in fine condition.

One day the Association visited Mt. Vernon, and saw the tomb of Washington and the old homestead.

The next annual meeting is to be held in Chicago.

The following officers for the ensuing year were elected: President—C. L. Watrous, of Iowa; First Vice President—M. A. Hunt, of Illinois; Secretary—D. Wilmot Scott, of Illinois; Treasurer—A. R. Whitney, of Illinois.

NEW MODE OF KEEPING FRUIT.

A new method of packing fruit for shipping long distances and for storing is under trial in Nova Scotia. It consists in packing the fruit in infusorial earth. The inventor of the method describes his fruit case as "a case within a case. Its size is a matter of slight importance. The essential feature is the space between the two cases. This must always be at least one inch deep. I pack this space quite full of infusorial earth. This peculiar substance is composed of a vast multitude of exceedingly minute shells. Every cubic inch of it contains more than a million of such organisms. And each of these shells holds a particle of air packed into its cavity. Therefore this inch layer of earth is simply a cushion of imprisoned air, and it acts in a similar way to the double windows on our houses in winter. The fruit had better be wrapped in fine manilla paper and laid in this inner case, and all the spaces among the fruit should also be filled with this earth."

Some satisfactory tests have been made in keeping and shipping fruits in these cases, and it is expected their value will be fully determined this fall.

SACCHARINE.

This is a newly discovered product of coal-tar. It is now being manufactured in Germany and sells at ten to twelve dollars a pound. It has proved a great success, and is used in many ways. It is so sweet that a teaspoonful of it converts a barrel of water into syrup. It does not decay, mold or ferment, neither is it attacked by bacteria. It has no injurious effect on the human system. It is expected that this substance will be used by druggists and physicians in their preparations, by bakers, confectioners, candy makers, preserve and pickle makers, liquor distillers, wine makers, &c., though it is not expected to take the place of sugar for all purposes. It has a far sweeter taste than sugar, and a faint, delicate flavor of Bitter Almonds.

HARPER'S MAGAZINE.

Those favorites of all plant-lovers, the Orchids, are ably written about and beautifully pictured in the August *Harper's*. The author is the botanist of Dublin University, F. W. Burbidge, F. L. S., and the artists are W. H. Gibson and Alfred Parsons. Prof. Burbidge has made a thorough study of this royal family of flowers, not only in the botanic gardens of which he is curator, but in their native haunts of the Eastern tropics. He gives some interesting narratives of the daring experiences of professional collectors who penetrate the remotest jungles of the Amazons and Indies for these precious growths.

AMERICAN SEED TRADE ASSOCIATION.

The fourth annual meeting of the American Seed Trade Association convened at Niagara Falls, on August 3d, and transacted business in relation to the interests of the seed trade. The officers for the ensuing year are, President, John Fottler, Jr., of Boston; 1st Vice President, F. E. McAllister, of New York; 2d Vice President, W. Atlee Burpee, of Philadelphia, Pa.; Secretary and Treasurer, Albert McCullough, of Cincinnati, Ohio; Assistant Secretary and Treasurer, C. L. Allen, Garden City, L. I. Philadelphia is to be the place of meeting next year.

AMERICAN HORTICULTURAL SOCIETY.

The annual meeting of the American Horticultural Society will be held at Cleveland, Ohio, on the 7th of the present month. This society is the original Mississippi Valley Horticultural Society, which has changed its name, and seeks to make its influence national. We hope its career will be a prosperous one. Some of the principal horticulturists of this country will be in attendance, and the meeting will undoubtedly be interesting and instructive.